...OGY DEPT.

NEW EQUIPMENT DIGEST

A Penton Publication

July, 195_

Volume 17—Number 7

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Use Inquiry Slips—Pages 8 and 80

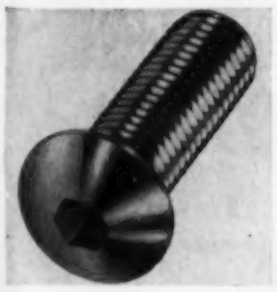
EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

BELT GRINDING ATTACHMENT
for air and electric portable tools

Use of abrasive belts in straight spindle air and electric portable tools is facilitated by this 61 Portabelt grinding attachment which consists of an idler pulley, supporting mechanism and small serrated contact wheel to be mounted on tool spindle. Unit is made of aluminum castings and is attached by split bracket to casing of the tool. Bracket makes attachment adaptable to almost any portable tool with spindle speeds high enough to give belt a linear speed of 5000 to 10,000 fpm. Initial belt sizes for two available models are 12 x 1 in. and 20 x 2 in. Applications include die and mold grinding, weld grinding and surface finishing of convex contours. Belt snaps on and off quickly. Made by **Carborundum Co.**, Dept. NED, P. O. Box 337, Niagara Falls, N. Y.

▲ For more details circle **NED-6100** on enclosed inquiry slip ▲

BUTTON-HEAD SOCKET SCREW
alloy construction assures strength

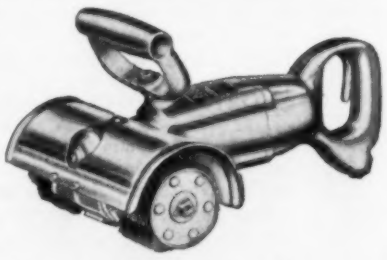


Where smooth appearance is desired or where countersinking is impractical, SPS Unbrako low button-head screws with hexagon sockets afford practical design as well as high strength. Made of alloy steel and heat treated, screws will replace those with higher heads without loss of strength. Screws are made in thread diameters of 0.164 and 0.190 in., as well as in ¼, 5/16, ⅜, ½ and ⅝-in. diameters. All are available in both National Coarse and National Fine precision rolled threads, except last two sizes which are produced in National Coarse series only. All diameters which are threaded to the head are made in four to seven lengths. Made by **Standard Pressed Steel Co.**, P. O. Box 581, Jenkintown, Pa.

▲ For more details circle **NED-6101** on enclosed inquiry slip ▲

CLEANING TOOLS
remove scale, paint and rust

Portable and self-contained, redesigned line of cleaning tools can be used to remove scale, old paint, rust or foreign matter from iron, steel, brick or concrete. They are offered in heavy and standard duty models, either electric and pneumatic powered. Set of revolving toothed cutters striking surface being cleaned produces impact by centrifugal force that is limited by an adjustable depth shoe. Tools cannot be overloaded or burned out. Replacement cutter bundles are available. Made by **Aurand Mfg. & Equipment Co.**, Dept. NED, 2643 Colerain Ave., Cincinnati 14, O.



▲ For more details circle **NED-6102** on enclosed inquiry slip ▲

WINDOW FAN
models made in two sizes

Line of window fans features fine-mesh metal guard, light weight, lifetime-lubricated ball bearings on larger model, and easy accessibility for dusting. The 20-in. two-speed model is adjustable to fit any window from 28½ to 36 in. wide. It is powered by a 115-hp direct drive motor which delivers up to 2320 cfm. The 24-in. belt-driven model (illustrated) fits windows from 31 to 38 in. wide, has a ⅓-hp motor and delivers up to 5030 cfm. Made by Murray Co. of Texas. Distributed by **H. C. Biglin Co.**, Dept. 101, 177 Harris St. N.W., Atlanta, Ga.

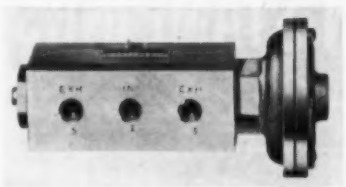
▲ For more details circle **NED-6103** on enclosed inquiry slip ▲

NIBBLING ATTACHMENT
fits ¼-in. capacity electric drill

Sheet metal cutting, scolloping, trimming and other operations are performed easily with this Nibbler attachment for ¼-in. capacity standard or heavy duty portable electric drills with speeds of 800 to 3500 rpm. This high speed punch type cutter attachment will cut up to 19-gage sheet steel, brass, copper, fiber or plastic. Device cuts ⅛-in. width and handles easily for intricate work. Made by **Mall Tool Co.**, 7725 S. Chicago Ave., Chicago 19, Ill.

▲ For more details circle **NED-6104** on enclosed inquiry slip ▲

DIAPHRAGM OPERATED VALVE
can operate on 12 to 35 psi air



Applications where only 12 to 35 psi air for pilot control is available can be served with the Quick-As-Wink diaphragm operated spring-return single plunger valve. Housing is aluminum, and hollow plunger is stainless steel with precision-placed radial ports. Spring return is under diaphragm push plate, permitting open end exhaust if desired. Valves are tapped for ⅛ or ¼-in. pipe connection, in 2-way, 3-way, double 2-way; 4-way and 5-way designs for use with air, oil or water at line pressures to 125 psi, as well as for vacuum uses at temperatures not exceeding 150° F. Made by **C. B. Hunt & Son, Inc.**, 1860 E. Pershing Ave., Salem, O.

▲ For more details circle **NED-6105** on enclosed inquiry slip ▲

DRAFTING LEAD HOLDER
balanced for line drawing & lettering

Any required hardness of lead for drafting operation is held securely without breaking by this Vemco Tec lead holder. Light in weight and balanced, it tapers evenly to point for line drawing and lettering operations. Lead can be extended and sharpened to any desired point. Made by **V. & E. Mfg. Co.**, P. O. Box 950M, Pasadena 20, Calif.

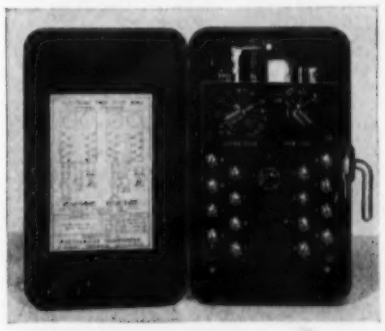
▲ For more details circle **NED-6106** on enclosed inquiry slip ▲

HYDRAULIC SWIVEL JOINT
for blowoutproof, high pressure use

Self-aligning feature of line of swivel joints used in high pressure hydraulic circuits where flexible blowoutproof all-metal lines are desired simplifies installation, eliminates binding and minimizes wear. Joints are made in four styles with straight or angle connections for use with ¼, ⅜, ½ or ⅝-in. tubing or pipe. All styles and sizes are offered in a choice of AN, Industrial Ermeto or standard threads. Pressure ratings are 3000 psi with steel or aluminum casing and stainless steel ball, and temperatures ranging from −100° to 500° F can be accommodated. Joints swivel 360 degrees and have 15-degree side flexibility. They will also handle air, steam, refrigerants, lubricants or chemicals at extreme pressures and temperatures. Made by **Barco Mfg. Co.**, Dept. J-14, 1801 Winnemac Ave., Chicago 40, Ill.

▲ For more details circle **NED-6107** on enclosed inquiry slip ▲

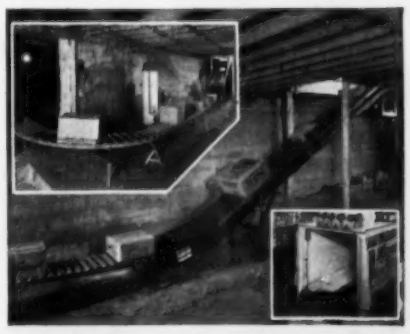
ELECTRONIC TIMER
provides four basic types of timing



Interval, delayed action, automatic repeat and programming are four basic types of timing provided by type 30HL1 automatic electronic timer. These types, and many variations, are utilized by changing external connections to the terminal board. Electronic circuit is self-compensating for changes in line voltage. Only one vacuum tube and one relay are used. Main contacts are rated 10 amp 115 v. Made by **Photoswitch Inc.**, 77-89 Broadway, Cambridge 42, Mass.

▲ For more details circle **NED-6108** on enclosed inquiry slip ▲

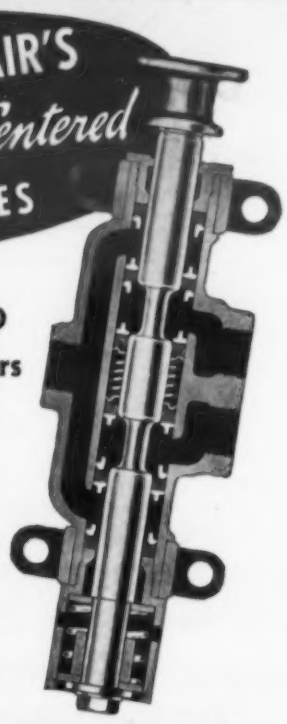
GRAVITY-POWER CONVEYOR
combined to increase usable space



This installation of combined gravity and Power Helper conveyor units features usable space over the outlet for storage. Goods received by chute and gravity line are sent from basement to floor above by the gravity-power units. Gravity conveyor is 15 ft long and has four rollers per foot, while power conveyor is 16 ft long and has 14½-ft boom length on a 25-degree incline and a 2-ft power tail section. Unit is powered by a ¾-hp, 440-v electric motor mounted under the outlet. Made by **Metzgar Co.**, 416 Douglas St. N.W., Grand Rapids 4, Mich.

▲ For more details circle **NED-6109** on enclosed inquiry slip ▲

VALVAIR'S Spring-Centered NEUTRAL VALVES



STOP FAST . . . HOLD
Double-acting Air Cylinders
in ANY POSITION!

Valvair's new spring centered neutral valve is for air, hydraulic or vacuum service; for pressures up to 300 p. s. i. Sizes: ¼" through 1". Control assembly can be knob, lever, treadle, cylinder or solenoid.

Write for Bulletin KN-7.

VALVAIR CORPORATION • 947 Beardsley Ave., Akron 11, Ohio
Affiliate: Sinclair-Collins Valve Company

Rely Upon Valvair — 3-WAY — 2-WAY — 4-WAY

▲ For more details circle NED-6110 on enclosed inquiry slip ▲

READ THIS!

IF YOU WANT TO MEASURE FORCE ACCURATELY

Now, over 500 industrial firms are accurately measuring force —thrust or pull—and checking or eliminating time consuming calculations, guesstimating.

The Hunter Force Indicator, above, can save you time, errors, money, too. It's precision-made, performance-proved, ruggedly constructed. Cost is low.

Size: 6½" long, 2" wide, 1 13/32" deep. Available in 12 models.

SEND FOR FREE LITERATURE. DO IT NOW!

HUNTER Springs in Springs

HUNTER SPRING CO.
LANSDALE, PA.

▲ For more details circle NED-6111 on enclosed inquiry slip ▲

NOW!.....the BIGGEST single sheet of TEFLON ever made!

Order this outstanding insulating material in sizes up to *60" x 72"*—and save money, time and headaches.

If you have used large gaskets laminated from the old small sheets of TEFLON, you've faced problems like blow-through and leakage. And you have fretted about waste, if you've had to cut two 13" discs—because that meant using *two* of the old 24" x 24" sheets—and throwing away the unused portions.

You pay no more per square inch for the new TEFLON size to get trouble-free gaskets, to get more cuttings per sheet. Requires less handling. Excellent for chemical table tops, other uses. Write today for specifications and TEFLON Brochure #201.

ELECTRONIC MECHANICS INC.
101 CLIFTON BOULEVARD, CLIFTON, NEW JERSEY

▲ For more details circle NED-6112 on enclosed inquiry slip ▲

NED Never Vacations!

It continues to work for you right through the summer months. But, while you are swimming in some cool lake, pulling in that frisky fish or just lazyin' in the shade, New Equipment Digest continues to present information on the newest of industrial products, materials, processes and literature. Your copy will be waiting for you when you return refreshed from that well-earned vacation. And you can quickly brush up on those products which will ease your tasks.

By a process simpler than ordering vacation tickets by phone, NED's inquiry slip can be checked to bring you further information on any item right to your desk. Use it to check off your requirements in this issue of New Equipment Digest.

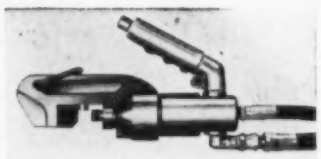
A. N. Gregg
EDITOR

TORQUE SCREW DRIVER accommodates interchangeable bits

Especially suited for electronic equipment assembly, torque screw driver features easy-to-read dial and is equipped to accommodate interchangeable bits for tightening and testing torque on all types of screws. Tool is available in range of sizes for precision torque measurement from 0 to 6 inch-ounces to 0 to 24 inch-ounces. Made by **Apco Mossberg Co.**, 102 Lamb St., Attleboro, Mass.

▲ For more details circle NED-6113 on enclosed inquiry slip ▲

STEEL ROD CUTTER exerts up to 20-ton thrust



Rapid production cutting of up to ½ in. steel rod is possible with model 200-E Guillotine which has complete cutting cycle of ¼-second. Press of thumb-button mounted on handle grip initiates cutting action. Unit exerts up to 20-ton thrust when used with portable high-speed hydraulic pump powered by 2-hp 220/440-v three-phase motor and connected to 25-ft hydraulic hose. Blades are easily removed for sharpening. Unit is also adaptable to high-speed riveting, punching and swedging operations and is available with hot-cutting extension equipment. Made by **Manco Mfg. Co.**, Washington St., Bradley, Ill.

▲ For more details circle NED-6114 on enclosed inquiry slip ▲

SHORT RUN STAMPINGS
Any Shape-Any Material

HPL produces stampings economically in lots of 25 to 25,000 pieces, for experimental or development work or other limited quantity requirements.

Exclusive HPL Fast-Tooling method saves up to 80% of conventional tooling costs, permits minor die changes quickly and inexpensively. Dies are maintained for all future orders without charge.

Speedy delivery is available on parts made to your rigid specifications from any material that can be stamped. Send sample part or blueprint for quotation.

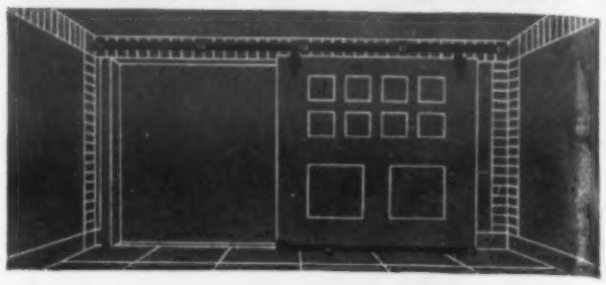
Write today for Bulletin No. 718

716-HPL

HPL Manufacturing Co.
15211 Miles Ave. • Cleveland 28, Ohio

▲ For more details circle NED-6115 on enclosed inquiry slip ▲

COBURN
SLIDING DOOR HARDWARE



. . . LOW INSTALLATION COST
. . . SMOOTH, EASY OPERATION
. . . LONG, TROUBLE-FREE LIFE
. . . ADAPTABLE FOR BOTH NEW AND REMODELING JOBS

Sliding door hardware for industrial applications of all types: Straight-sliding, sliding-folding, around-the-corner, roundhouse and fire doors.

For additional information write to Sales & Engineering, 56 Sterling St., Clinton, Mass. or consult your classified telephone directory.

THE COLORADO FUEL & IRON CORPORATION—Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Clinton, Massachusetts

COBURN PRODUCTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION
CF&I

▲ For more details circle NED-6116 on enclosed inquiry slip ▲

BROWNING

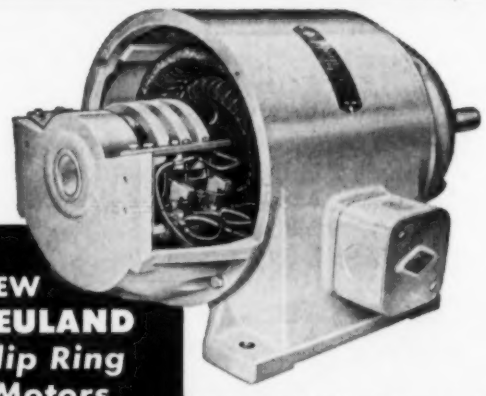
First Again!

BROWNING SHEAVES
with "UNBREAKABLE" MALLEABLE IRON
SPLIT TAPER BUSHINGS

WRITE FOR THE NAME OF THE BROWNING DISTRIBUTOR NEAR YOU

BROWNING MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY, U. S. A.

▲ For more details circle NED-6117 on enclosed inquiry slip ▲



NEW REULAND Slip Ring Motors

FEATURE SHORTER OVERALL LENGTH VERSATILE, FLAT END BELLS

Reuland Slip Ring Motors provide both (1) variable speed and (2) high starting torque on low starting current. Ideal for crushers, cranes, fans, etc.

FLAT END BELLS permit easy, direct-mounting of equipment on either end.

SHORTER LENGTH assures simpler mounting in tight spaces. (Same dimensions as a squirrel cage motor.) Greater shaft rigidity is obtained through shorter bearing-to-bearing spacing.

WITH GEAR REDUCERS Reuland Slip Ring Motoreducers provide maximum versatility.

AVAILABLE in drip-proof or totally enclosed designs. Wide range of ratings.

Write for engineering folder covering the complete Reuland Line—No. 2000-7

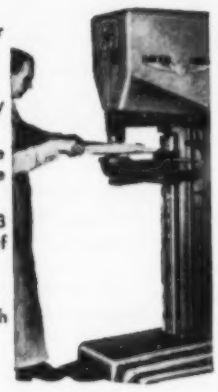
Inquiries invited on special motors designed to order.

RE REULAND ELECTRIC CO.
ALHAMBRA, CALIFORNIA • DISTRIBUTORS IN PRINCIPAL CITIES

▲ For more details circle NED-6118 on enclosed inquiry slip ▲

PUT YOUR SKID COSTS ON THE SKIDS . . . WITH AUTO-NAILER*

AUTO-NAILER MAKES SKIDS FASTER . . . STRONGER



- 3-nails-a-second speed saves up to 75% in labor costs over hand nailing.
- More rigid skids—less racking.
- No jigs necessary — Auto-Nailer will nail any pattern.
- Auto-Nailer is flexible—changing from one size (or design) to another requires no machine adjustment.
- Auto-Nailer makes and drives its own nails—3 a second—can be clinched or bradded, if desired.
- Auto nails will not back out.
- Auto nails reduce nail cost. Use only length that's needed. None bent; none dropped.

Write for free catalog

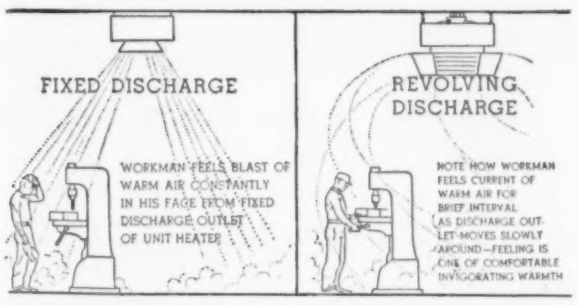
*Trademark Registered

AUTO-NAILER CO.,
265 MARIETTA ST., ATLANTA, GEORGIA

For more details circle NED-6119 on enclosed inquiry slip

For more details circle NED-6120 on enclosed inquiry slip

What is the BIG difference between revolving and fixed unit heater discharge outlets?



WING REVOLVING UNIT HEATERS are successfully solving the heating problems of thousands of industrial plants today because they assure a uniform comfortable temperature throughout, with no hot blasts, no cold spots, no chilly corners. Instead of annoying hot blasts, the worker is conscious only of a pleasing sensation of fresh, live, invigorating warmth.

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey

For more details circle NED-6121 on enclosed inquiry slip

WATER FILTERS
made in both sump and line types

Currently used in hydraulic and other low pressure oil recirculating systems, synclinal filters are now being made for filtering water. Both sump and line types in capacities from 5 to 100 gpm and 5 to 50 gpm, respectively, are available. Monel screen sizes range from 30 to 200-mesh. Line types operate in any position and can be serviced without disturbing pipe connections. Both models can be disassembled, cleaned and reassembled easily. Balanced synclinal design provides maximum filtering area with large capacity for accumulating residue. Made by **Marvel Engineering Co.**, Room 200, 627 W. Jackson Blvd., Chicago 8, Ill.

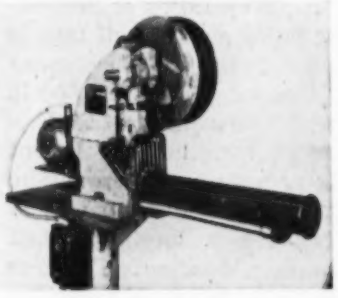
For more details circle NED-6122 on enclosed inquiry slip

ANGLE-HEAD PNEUMATIC DRILL
is usable in close quarters

Compact and light in weight, this ½-in. angle-head pneumatic drill is easy to use even in close quarters. Built-in regulator allows for varying speeds of powerful air motor, and proper lubrication is assured by built-in automatic oiler. Both lever and button throttle controls are available. Drill is furnished with ½-in. Jacobs geared chuck, key, lubricant, hydraulic fitting and rubber air hose assembly. Made by **Mall Tool Co.**, 7725 S. Chicago Ave., Chicago 19, Ill.

For more details circle NED-6123 on enclosed inquiry slip

HALF PRESS
frame can be bolted to any base



Consisting of upper half of a press frame, complete with ram, crankshaft, flywheel and clutch mechanism with trip lever, this half press is severed below the reinforcing cross brace between the two column members. Web is easily drilled for bolting the frame to any required base. Illustration shows half press adapted for nibbling ends of shell cases. Conversion is similar to a horn press. Another use is for shell sizing with an 18-in. shut height. In both cases bases were made to order. Made by **Benchmaster Mfg. Co.**, Dept. NED-7, 1835 W. Rosecrans Ave., Gardena, Calif.

For more details circle NED-6124 on enclosed inquiry slip

For more details circle NED-6125 on enclosed inquiry slip

IDEAL Thermo-Grip® Does Soldering Jobs Better!

Thermo-Grip with "Plier" attachment speeds up soldering lugs to cables.

FASTER! Resistance heating provides instant heat for fast production soldering.

EASIER! One hand always free to handle solder. Concentrates heat. Does jobs no other tool can handle.

CHEAPER! Time savings up to 30%—no waste — no cold flow joints—no re-makes.

NEW LOW-COST MODEL

Sold Through America's Leading Distributors

"Standard" 1000-Watt Model with "Plier", "Pencil" and "Fork" attachments also available.

TEST IT FREE!

IDEAL INDUSTRIES, Inc.
1032 Park Avenue
Sycamore, Illinois

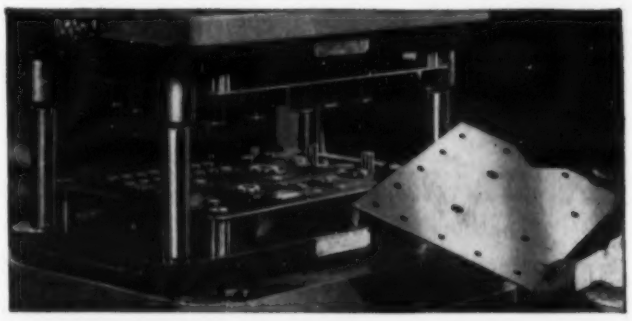
Please arrange FREE Thermo-Grip Demonstration and send catalog data.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE____

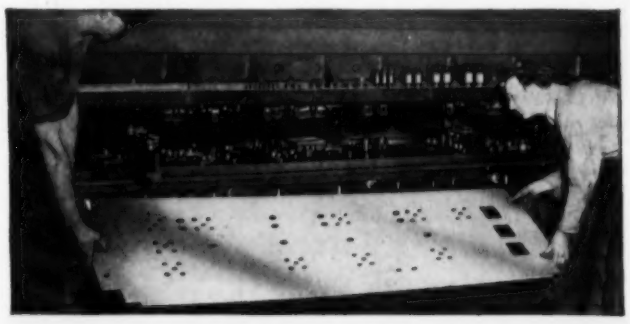
For more details circle NED-6126 on enclosed inquiry slip

New • Fast • Proven

LOW COST METHODS for PERFORATING and NOTCHING SHEET METALS



Whistler *MAGNETIC* Dies at work in large inclinable press. Magnetized units hold the retainers. No bolting required. A fast, economical method in making up a punch and die set for short or long runs. All parts re-usable.



Whistler *ADJUSTABLE* Dies on ⅛" steel perforating and notching job, using Tee slotted die set. With Whistler Adjustable Punch and Die units production starts within hours instead of weeks. Last minute changes made quickly.

Both methods feature: LOW DIE COSTS
All units and parts are interchangeable and used repeatedly in different arrangements. **INCREASE PRESS PRODUCTION—** Down time is minutes as compared to hours for change-over. For precision work in all types and sizes of presses. **START PRODUCTION *at once.*** Pierce up to ¼" thick mild steel. Saving money in the best known plants.

Here are the complete details with prices and application illustrations. Send for these catalogs. No obligation.

NAME_____
FIRM_____
ADDRESS_____
CITY_____ ZONE____ STATE____

S. B. WHISTLER & SONS, Inc.
Adjustable, Magnetic, Custom and Cam Dies for all Industry
750 Military Road Buffalo 23, New York

For more details circle NED-6127 on enclosed inquiry slip

STEEL

Every Kind

Some steel products are in short supply but over-all stocks are still large, diversified

NEARBY STOCKS INCLUDE:

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—U. M. & sheared, Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types & coatings
TUBING—seamless & welded, mechanical & boiler tubes
STAINLESS—Allegheny sheets, plates, bars, tubing, etc.
REINFORCING bars & access.
BABBITT bearing metal
MACHINERY & TOOLS for metal fabrication

RYERSON

Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco Spokane, Seattle

For more details circle NED-6132 on enclosed inquiry slip

TATE'S OIL *gets things moving fast!*

Easy does it—and TATE'S OIL easily loosens frozen bolts, nuts, hinges, rusted pins, brake cables, cylinder heads, sticky valves . . . any metal joint that is frozen, gummed, or corroded!

Send NOW for FREE SAMPLE and name of nearest supply house!

PENETRATING OIL—RUST SOLVENT

contains no heavy base oils . . .

harmless to hands and finest tools!

Used by machine and repair shops, wire mills, factories, bus and trucking companies, garages—wherever machinery must be kept in operation. Cleans metal—removes rust on chrome . . . metallic shavings from files . . . cosmolene from machinery. Write TODAY for your FREE SAMPLE and full details!

Save time, money, effort—with TATE'S OIL!

TATE CHEMICALS, Inc.
CAMDEN, NEW YORK

For more details circle NED-6133 on enclosed inquiry slip

EFFICIENT *Electric* HEAT GIVES YOU $$$ SAVINGS

CHROMALOX *Electric* HEATERS

SAVE MONEY, TIME AND LABOR WITH THESE EFFICIENT AND PROVED HEATING UNITS

If you use heat in your production line, processes or products, Chromalox Electric Heaters can most likely point the way to added savings through increased efficiency, lowered costs, decreased working time. See for yourself how Chromalox Heaters can go to work so easily in your plant.

GET THIS BOOKLET—IT TELLS YOU HOW

EDWIN L. WIEGAND CO., Industrial Division
7509 THOMAS BLVD., PITTSBURGH 8, PA.
Send me the illustrated booklet "100 Ways To Apply Electric Heat."

Name_____
Company_____
Street_____
City_____ Zone_____
State_____
I use heat for_____
18-12

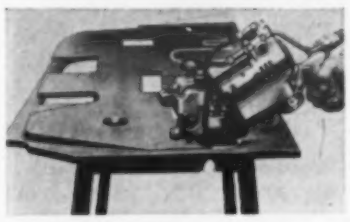
CHROMALOX

See other advertisement on page 61

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-6134 on enclosed inquiry slip

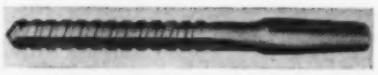
HAND FLAME CUTTER
cuts 5/64 to 2¼-in. metal plate



Steel plate from 5/64 to 2¼ in. thick can be cut with this 19-lb Cadet hand-operated oxyacetylene flame cutter which will do straight, I-beam and bevel cutting as well as circle cutting to radius of 1 in. Torch is adjustable both vertically and horizontally and can be set at any angle for bevel work. Graduations in 5-degree increments are inscribed in torch holder body. Machine has self-contained electric motor and parts that are easily accessible and interchangeable. Instruction plate aids proper selection of cutting speeds, oxygen pressure and torch tips, as well as distance between tips and work surface. Made by **American Pullmax Co.**, 2457 N. Sheffield Ave., Chicago 14, Ill.

For more details circle NED-6135 on enclosed inquiry slip

MASONRY DRILL BIT
various lengths and diameters offered



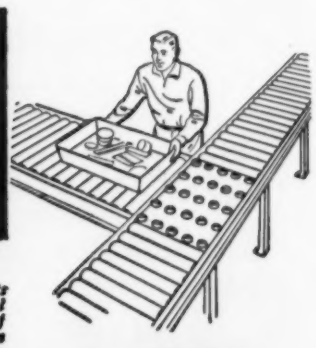
One man can drill holes in 'green' concrete with an electric or pneumatic hammer that has Thunder-Twist drill bit. This carbide-tipped masonry bit has two deep spiral vanes which speedily remove dust to eliminate binding. Holes from 3/16 to 1¼ in. diameter can be drilled up to 36 in. deep. Available lengths are 3, 4, 6, 12, 18 and 24 in. Special diameters, shanks or extra-length bits can be furnished. Made by **New England Carbide Tool Co.**, 54 Brookline St., Cambridge 39, Mass.

For more details circle NED-6136 on enclosed inquiry slip

HYDRAULIC PLATFORM LIFT
raises or lowers up to 750-lb loads

Simple operation of Step-on-It pedal pump is all that is needed to raise or lower loads weighing up to 750 lb with this model 14S hydraulic platform lift. Equipment is mounted on two 10-in. solid rubber rear wheels and two heavy duty, dual ball bearing, 6-in. swivel casters for ease in moving machine and its load. It can be moved over surfaces with humps, holes or rough surfaces with ease. Positive-locking brake assures stability while lifting load or at machine. Made by **Big Joe Mfg. Co.**, Dept. N-301, 184 N. Franklin St., Chicago 6, Ill.

For more details circle NED-6137 on enclosed inquiry slip



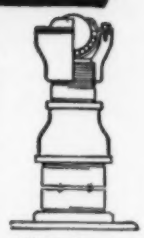
Logan Ball Transfer units consist of a large steel ball which rotates on a bed of small balls contained in a hardened steel cup.

BALL TRANSFERS

Logan Ball Transfers are handling equipment, designed primarily for use in transferring at right angles or where it is desired to rotate packages without lifting. Can be adapted to other applications. You can buy separate ball assemblies from stock or complete tables made-to-order.

Logan offers Ball Transfer units in several different sizes.

Further information on request.



Ball Pedestal units also available for handling sheets and plates.

Logan Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-6138 on enclosed inquiry slip

RETORT COKE WANTED

Manufacturer is in the market for a continuous supply of retort coke as formed on the upper walls and crowns of retorts or cells by the decomposition of heavy hydrocarbon vapors.

This material is usually quite dense and gray in color and can be segregated from the coal coke or removed from the cells at intervals. Highest prices paid.

Write or wire stating approximate quantities available.

BOX 10
New Equipment Digest
Penton Bldg., Cleveland, Ohio

For more details circle NED-6139 on enclosed inquiry slip

Meet those Exacting Requirements!

with **RYNEL** GEARS

Complete Facilities for
NAVIGATION
COMMUNICATION
AIRCRAFT
ELECTRONIC
Gear Requirements

Specialists in Fine Pitch Gears
Where Precision Specifications Are A "Must"

Design Engineering
High Volume Supply
Bar Stock To Finished Gears
Precision Inspection

RYNEL ENGINEERS can be in your plant the same day you call.

Send Blueprints for Quotation,
or Telephone for Consultation.
Telephone
STerling 4440

RYNEL CORPORATION — 302 MILLER STREET • STERLING, ILLINOIS

SPUR • HELICAL • WORM • WORM GEAR • INTERNAL SEGMENT • SPROCKET • RATCHET • STRAIGHT BEVEL GEARS

For more details circle NED-6140 on enclosed inquiry slip

NON-STICKING! TIGHT CLOSING! —no pressure build-up

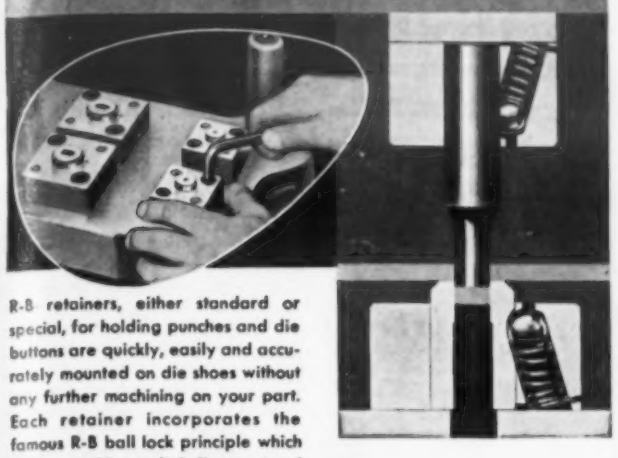
DAVIS NO. 13
AUTOMATIC PRESSURE REDUCING VALVES

- **FOR MANY USES—**
  No. 13 regulator designed for reduced flow requirements in heating equipment, vulcanizers, molding presses, steam kettles, etc.
- **EXCLUSIVE DESIGN**
  Single seated, tight closing, non-sticking. Large diaphragm, sensitive pressure adjustment. Compact, rugged, self-contained. Orifice type insures high lift, low maintenance.
- **TROUBLE-FREE SERVICE—**
  Built-in Strainer, finest quality, all internal parts accessible and renewable without disturbing piping.
- **FOR STEAM, AIR, OR GAS—**
  For initial pressures to 250 p.s.i.; reduced pressures, 1 to 100 p.s.i. Sizes from ⅜" to 2". Bronze or semi-steel bodies; bronze or stainless trim. Economical for use on small units. *Write for Bulletin 100-A.*

DAVIS REGULATOR CO.
Established 1875
2531 S. WASHTENAW AVE. CHICAGO 8, ILL.

For more details circle NED-6141 on enclosed inquiry slip

In DIE CONSTRUCTION Save Time



R-B retainers, either standard or special, for holding punches and die buttons are quickly, easily and accurately mounted on die shoes without any further machining on your part. Each retainer incorporates the famous R-B ball lock principle which assures positive radial alignment and vertical locking of punches and die buttons. Because standardized R-B punches, die buttons and retainers are ready for quick assembly in your dies, you save much of your skilled diemaker's time.

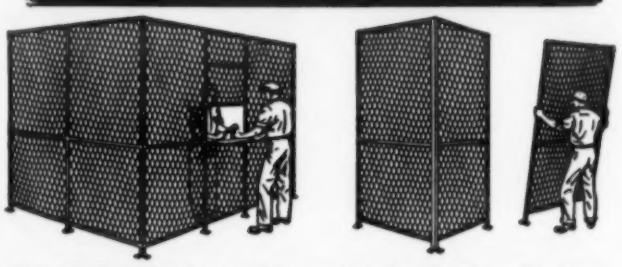
Tool standardization is the basis for efficient and economical production. With R-B you get the accepted standard of the sheet metal industry—in standard design features that save in engineering, die construction and operation.

For further information on how you can save time in die construction, write to—

ALLIED PRODUCTS CORPORATION
RICHARD BROTHERS DIVISION
DEPT. 65 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

▲ For more details circle **NED-6142** on enclosed inquiry slip ▲

Protect TOOLS AND EQUIPMENT WITH ACORN WIRE MESH PARTITIONS



•Provide Positive Protection

Acorn Wire Mesh Partitions, by enclosing tool cribs and stock rooms, prevent tool and parts pilfering, give tight control of tools, material and personnel in these areas. Divide large open spaces into efficient, separate departments, cut down confusion. Cost much less than solid walls, permit passage of light, air, sound and heat.

•Simple, Quick to Erect

Made in inexpensive standard panels in two designs. Acorn Wire Mesh Partitions are easy to erect, take down, or move anywhere, with no need to move radiators or lights. Can be added to, or reduced in size. Doors can be moved, and corners made quickly to meet changing needs.

ACORN
WIRE and IRON WORKS
5910 S. Lowe Ave., Chicago 21, Ill.

SEND TODAY for fully illustrated catalog. See why Acorn partitions are standard equipment in over sixteen thousand plants

▲ For more details circle **NED-6143** on enclosed inquiry slip ▲

Finding the best in GAS WELDING SUPPLIES

What are your gas-welding supply requirements? Welding Rods? Fluxes for welding and brazing? Silver brazing Alloys? Carbon rods and Plates? Or Asbestos Paper?

You'll find all the types and forms you need for a complete range of gas welding in Airco's Gas Welding Supply Catalog No. 12.

Send for a free copy today. Please write us on your business letterhead for Gas Welding Supplies, Catalog 12. Address: Advertising Department, Air Reduction Sales Company, 60 East 42nd Street, New York 17, N. Y.

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Divisions of Air Reduction Company, Incorporated
Dealers and Offices in Principal Cities

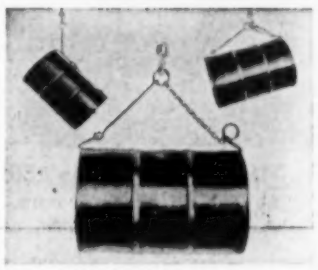
▲ For more details circle **NED-6144** on enclosed inquiry slip ▲

EXPLOSIONPROOF FILTER for inflammable liquid service

Offered with filtering areas of 1 to 50 sq ft, line of explosion-proof filters meets class 1 group D specifications for use in hazardous locations. Motor and switch are totally enclosed, and all pipe connections are welded to render them leakproof to both vapors and liquids. Diaphragm valve can be serviced without removing valve from manifold. Filter elements are stainless steel well-screen membranes and are especially suited to clarification of flammable liquids. Made by **Titeflex, Inc.**, 548 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle **NED-6145** on enclosed inquiry slip ▲

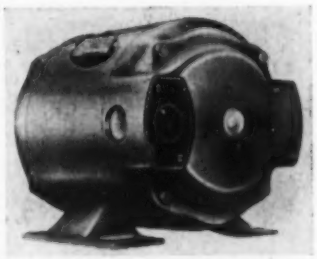
DRUM & BARREL SLING handles 1000-lb drum or keg with lip



Loading and unloading of trucks is facilitated by this general purpose sling which can pick up drum or barrel from lying position and set it on end. It handles any steel or wooden drum or keg that has a lip. Constructed of heavy welded chain with forged grab hooks, sling has 1000-lb capacity and weighs about 8½ lb. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

▲ For more details circle **NED-6146** on enclosed inquiry slip ▲

DUAL VOLTAGE MOTOR operates on either 115 or 230 v



Rota-Volt selector incorporated in capacitor type Power Poise motors of ⅛, 1/6, ¼, ⅓, ½ and ¾-hp simplifies changing of connection for operation on either 115 or 230 v and permits quick change in motor rotation direction. All electrical connections are on inside of the device with no chance for wrong connections. Voltage or direction changes are made by loosening screw in the Rota-Volt knob, pulling knob outward, then turning to the desired voltage and rotation position. A locating pin slips into a hole when the knob is properly positioned. Made by **Brown-Brockmeyer Co.**, 1002 Smithville Rd., Dayton 1, O.

▲ For more details circle **NED-6147** on enclosed inquiry slip ▲

Here's how to S-T-R-E-T-C-H your Steam Producing Dollars

Continental

PACKAGED AUTOMATIC BOILERS

The Continental Automatic Boiler is easily installed at low cost. With a guaranteed high operating efficiency, it assures you continuing savings year after year. Steam moisture content at less than 1% is proven by independent laboratory tests. Fully automatic, the Continental assures a high heat transfer with resultant low gas temperature at the stack. No furnace refractory makes possible easy access to front and rear of boiler through hinged doors. Economically burns oil, gas or combination. Some sizes carried in stock. Details and specifications gladly sent on request. Write today!

Contact your local supplier today, or write

BOILER ENGINEERING AND SUPPLY COMPANY, INC.
Manavon Street • Phoenixville, Pa.
40 Years of Boiler Experience

▲ For more details circle **NED-6148** on enclosed inquiry slip ▲

Now Available For WATER FILTERING

SUMP TYPE (Cutaway)

LINE TYPE (Cutaway)

The Great **MARVEL SYNCLINAL FILTERS**

- EASY TO CLEAN
- OPERATE LONGER BETWEEN CLEANINGS
- EFFICIENT
- NO MOVING PARTS TO WEAR or GET OUT OF ORDER

Capacities of (Line Type) 5 to 50 g.p.m. (Sump Type) 5 to 100 g. p. m. Monel mesh sizes 30 to 200.

Outstanding qualities made Marvel Synclinal Filters the choice for hydraulic oil systems. The same qualities are now available for water filtering, in both sump and line types. Line models operate in any position and may be serviced without disturbing pipe connections.

Write For WATER FILTER Data

MARVEL ENGINEERING COMPANY
627 W. Jackson Blvd. Chicago 6, Ill.

▲ For more details circle **NED-6149** on enclosed inquiry slip ▲

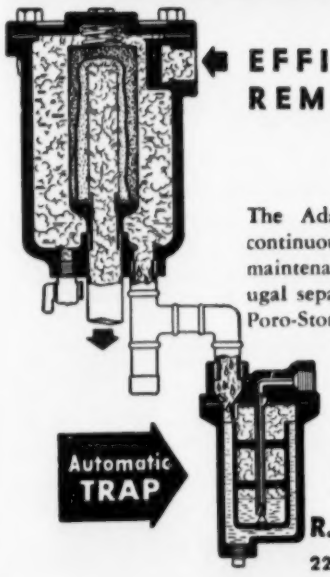
NEW "Lifetime" Dial Thermometers

You're *always* sure of accurate temperature readings with this new Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed 5" aluminum alloy case. Available in standard ranges to 1000°F. Easy-to-read scale 12" long. Write for details. **The Foxboro Company, 1347 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO Reg. U. S. Pat. Off. DIAL THERMOMETERS

▲ For more details circle **NED-6150** on enclosed inquiry slip ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:

OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle **NED-6151** on enclosed inquiry slip ▲

Effective even where other lubricants have failed

Moly-sulfide

A LITTLE DOES A LOT

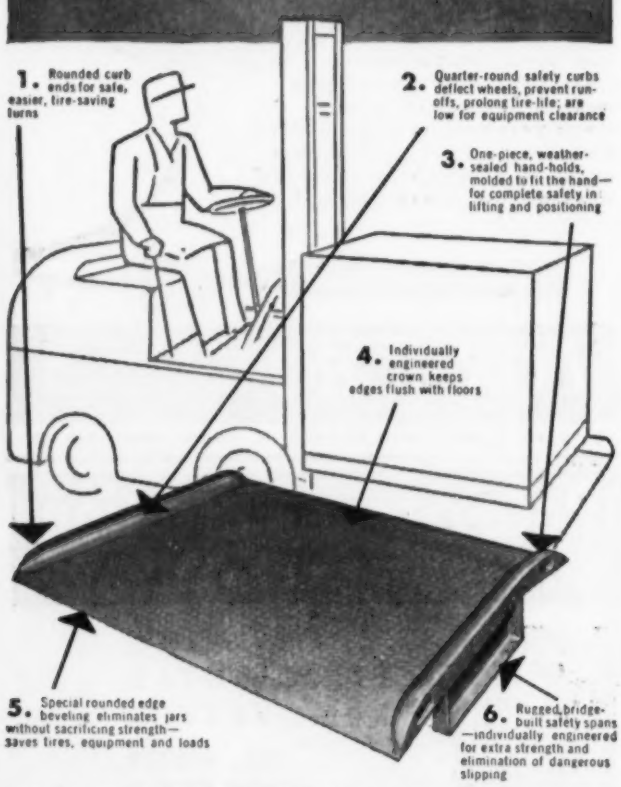
Moly-sulfide, a solid film lubricant, stands out most where the lubricating conditions are the most difficult. If you have to contend with extreme conditions of pressure, temperature, fretting, or velocity, you should try *Moly-sulfide*. First write for a copy of this free 40-page booklet which shows where the above conditions have already been overcome in the shop and in the field.

Climax Molybdenum Company
500 Fifth Avenue · New York City 36 · N·Y

MS. 7

For more details circle NED-6156 on enclosed inquiry slip

You can SEE 6 Exclusive Money-Saver Features in MAGCOA light-weight HEAVY-DUTY DOCKBOARDS



Light-weight HEAVY-DUTY Magnesium Construction (⅓ the weight of steel) with resulting increases in efficiency and safety . . . individually engineered for *your* requirements . . . long life that you can take for granted: these are the other money-saver features that make Magcoa Dockboards a *good* investment right from the start and your *best* investment in the long run.

Write today for literature showing why many leading companies *standardize* on Magcoa Dockboards for freight car and truck loading, how they benefit . . . and how you can, too. At the same time, ask for new literature showing how Magcoa's magnesium fabricating experience and facilities can help you improve your products through use of light-weight, heavy-duty magnesium.

MAGNESIUM COMPANY OF AMERICA

EAST CHICAGO 6, INDIANA—*Representatives in Principal Cities*

DIVISION OFFICES

NEW YORK 20, 30 Rockefeller Plaza • PHILADELPHIA 18, 8001 Southampton Ave. • WASHINGTON 5, D.C., Walker Bldg. • HOUSTON 17, 7657 Moline St. • LOS ANGELES 34, 8922 W. 25th St. • SAN FRANCISCO 4, Russ Bldg.

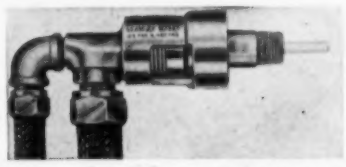
For Dockboard details circle NED-6157 on inquiry slip
For Fabrication details circle NED-6158 on inquiry slip

SHELF TRUCK
with rubber or steel casters

Sixteen bolts and lock nuts used to fasten each shelf to the legs of this shelf truck give it rigidity. Shelves are made of 14-gage steel with a 2-in. flange, while 1¼ x 1¼-in. legs are of ⅛-in. angle iron. Height of truck is 36½ in. including casters. Two 5-in. rigid and two 5-in. swivel casters, either rubber or steel, are included. Unit is shipped knocked down. Made by **Bay Metal Products**, 3009 N. Sixteenth St., Philadelphia 32, Pa.

For more details circle NED-6159 on enclosed inquiry slip

ROTATING PRESSURE JOINT
made in syphon and single-flow types



Offered in standard pipe sizes from ½ to 1¼ in., this rotary pressure joint will convey liquids and gases from stationary pipe line to revolving receptacle. Maximum rating is 150 psi, 350 rpm and 350° F. Screw adjustment compensates for normal wear of rotary seal without removing joint from line. Floating rotary graphite seal is self-aligning to compensate for misalignment. Pressure equalizing member relieves seal of excessive pressure to reduce wear. Made by **Seamlex Co.**, Dept. N, 4123 24th St., Long Island City 1, N. Y.

For more details circle NED-6160 on enclosed inquiry slip

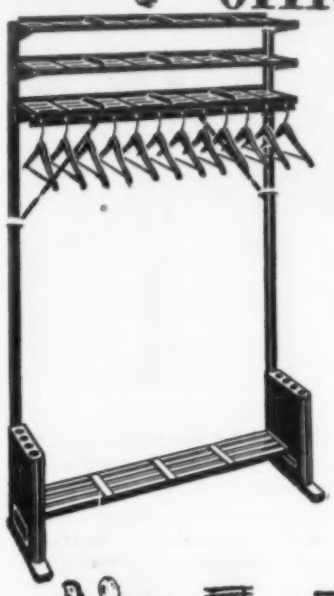
ELECTRONIC TIMER
has 60 millisecond-60 second range

Time periods between 60 milliseconds and 60 seconds can be set manually by means of indicator on 3⅜-in. dial of Promatic electronic timer. Steps within the overall timing range are covered by plug-in condensers. Timing begins upon closure of any external switch, and control contacts either open or close at end of timing, depending upon circuit requirements. Contacts are double-pole double-throw, rated at 10 amp, 125 v ac, noninductive. Operation is from 115 v ac or 220 v ac, 60 cycles. Timer can be panel, wall or cabinet mounted. Made by **General Control Co.**, 1211 Soldiers Field Rd., Boston 34, Mass.

For more details circle NED-6161 on enclosed inquiry slip

For more details circle NED-6162 on enclosed inquiry slip

The OFFICE VALET



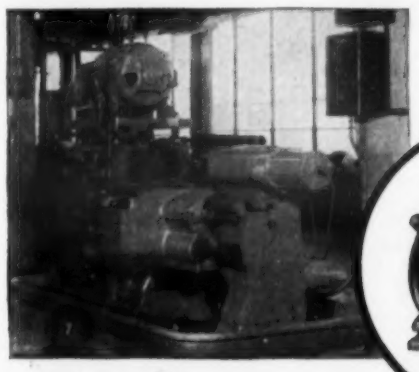
Reduce Absenteeism —keep employees' wraps dry, aired, and in press

With Office Valet wardrobe equipment employees do not face weather in damp-clothing that has been crumpled in lockers, do not eat soggy lunches soaked by wet hats or mittens. The 4 foot 3-U rack, illustrated, accommodates 12 employees with spaced coat hangers, individual hat spaces, umbrella racks and overshoe shelf. Other units with or without lock boxes, in sizes and capacities for every office and factory need.

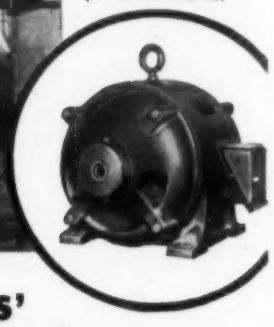
WRITE FOR BULLETIN OV-8

VOGEL - PETERSON CO.
624 So. Michigan Ave., Chicago 5, Ill.

For more details circle NED-6163 on enclosed inquiry slip



7½ Horsepower Century drip proof motor on a special production lathe.



Century MOTORS'

Unusual Freedom from Vibration Helps Maintain Close Tolerances — with a Minimum of Rejects

Century motors are designed to help you get the accuracy that was built into your modern production machines. They are ruggedly built, carefully machined and well balanced both mechanically and electrically.

You may select Century motors in: open drip proof — splash proof — or totally enclosed fan cooled construction to assure uninterrupted production against various atmospheric hazards.

They are built in a wide range of sizes from 1/8 to 400 horsepower. Specify Century for all your equipment.

CENTURY ELECTRIC COMPANY -700R
1806 Pine Street, St. Louis 3, Missouri
Offices and Stock Points in Principal Cities

CENTURY SERVICE Is Near Any CENTURY Motor Driven Equipment

For more details circle NED-6164 on enclosed inquiry slip

WIRE MESH

Maybe it all *does* look pretty much the same at first glance. But when a firm has been making wire mesh for 70 years man and boy, there's bound to be a little more to it than meets the eye — a little more know-how in engineering and weaving, a little more quality in the product, a little more service and satisfaction for the user.

JELLIFF WIRE MESH is woven in all ductile metals
JELLIFF WIRE MESH is woven in all commercial weaves
JELLIFF WIRE MESH is woven in widths up to 72 inches
JELLIFF WIRE MESH is economical. Every foot runs true to the specifications.

★ ★ ★ ★

JELLIFF WIRE MESH is a quality product and has been for 70 years. You can depend on it.

Write today for full details about JELLIFF WIRE MESH, JELLIFF WIRE MESH PRODUCTS, and JELLIFF'S CONSULTATION SERVICE on wire-mesh engineering. Address Department 11.

THE C. O. **JELLIFF** MFG. CORP.
DIPPING BASKETS · LEKTROMESH · RESISTANCE WIRE
WIRE MESH PARTS · WIRE CLOTH · STRAINERS · FILTERS
SOUTHPORT · CONNECTICUT
WIRE PRODUCTS · Jelliff · SINCE 1800

For more details circle NED-6165 on enclosed inquiry slip

SAFELY CLEAN MOTORS

& ELECTRICAL EQUIPMENT WITH FORMULA 602

SAFE ON WORKERS

Formula 602 reduces employee time-loss due to solvent toxicity. Formula 602 is really safe and efficient—use it to clean motors, generators, radio parts, coils, condensers, switches, transformers etc.

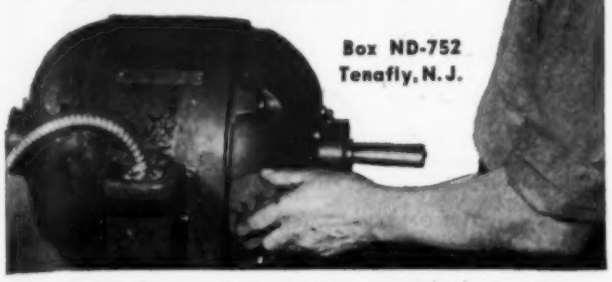
SOLVENT REPLACEMENT FOR CARBON TETRACHLORIDE

Eliminate the use of dangerous solvents! Formula 602 is designed to safely replace toxic solvents. It cleans instantly, dries rapidly without a residue and will not corrode metals. Formula 602 completely minimizes fire hazards and the dangers of dermatitis. Use it in wipe, dip or spray application—it's safe and effective for all your electrical equipment.

SEND FOR FULL INFORMATION!

the PENETONE co.

Box ND-752
Tenafly, N. J.



For more details circle NED-6166 on enclosed inquiry slip

Aerovent BELTED DUCT FAN

KEEPS MOTOR OUT OF AIR STREAM

For Foundries, Paint Spray Booths, Sanding, Acid Tank Rooms, etc., where fan motors must be protected.

Aerovent Belted Duct Fans with "Macheta" design handle maximum air with minimum use of power. Sizes 12" to 84"; 2, 4, or 6 blades. All fans furnished with ball bearing motors suitable for mounting in any position. Easily installed. For many applications.

Certified Ratings — Air Delivery are in accordance with Standard Test Code for Centrifugal and Axial Fans — PFMA

Other Models: Direct Connected, Man Cooling, Extended Shaft, Duct Type, Pulley Drive.

Write today for ENGINEERING BULLETIN

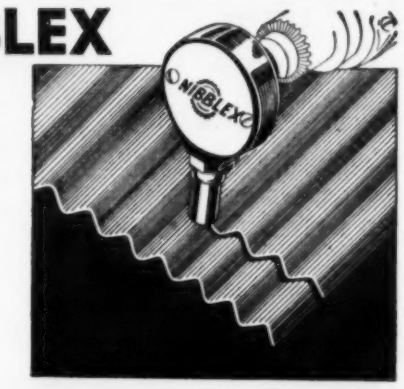
AEROVENT FAN CO., INC.
ASH AND BROWN STREET, PIQUA, OHIO

Sales Engineers in Principal Cities

For more details circle NED-6167 on enclosed inquiry slip

THE NIBBLEX

even cuts CORRUGATED SHEET METAL as clean as a whistle! NO SHEARING ACTION - BUT



A NEW PRINCIPLE OF A DIE and PUNCH

No Bending • No Burrs • No Rough Edges

Fits any ¼" drill, air or electric. Precision made. Weighs only 11 ozs. Still cuts up to 20 ga. regular steel, 16 ga. tempered metals. Cuts circles 1" radius. Uses side punch for corrugated sheets, straight punch for flat.

Price only $13.75 with one punch. Additional punch $3.15.

TRY IT FREE FOR TEN DAYS WITHOUT OBLIGATION
Pay only if you keep it.

Nord INTERNATIONAL CORPORATION

P. O. Box 44 N — Denville, N. J.

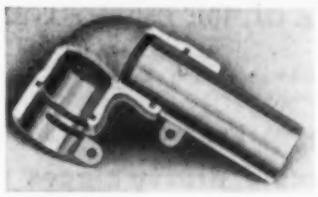
For more details circle NED-6168 on enclosed inquiry slip

NAILING MACHINE
drives three nails per second

Fabrication costs for skids, boxes, frames and other items made of all types of wood, light metal and plastic can be reduced through use of Auto-Nailer automatic nailing machine. Nails are driven by stepping on a pedal. Holding the pedal down drives nails at rate of three per second, with clinching or bradding at the same time. Nails are driven flush or countersunk without splitting wood and are cut from a coil of knurled nailing wire. One shop that was making skids by hand began using the machine and cut time per unit from 4 minutes to 45 seconds. Size and design changes can be made in fabrication without machine adjustment. Any desired length of nail is produced simply by adjusting a knob. Made by **Auto-Nailer Co.**, 263 Marietta St. N. W., Atlanta 3, Ga.

For more details circle NED-6169 on enclosed inquiry slip

STAINLESS TUBE FITTING
joined without threading or flaring to thin-wall stainless tube or pipe



Quikupl stainless steel fitting, designed to reduce assembly costs, permits use of lighter-wall stainless steel tubing. It can be joined to tube or pipe without threading, flaring, sweat-soldering, brazing or welding. With this coupling, pipe or tube is cut to length, deburred and inserted in the fitting which is tightened by a small screw. Fittings resemble standard elbows, tees, ells and other universal shapes, with the addition of a clamp, an integral part of the fitting.

A synthetic sealing ring in a machined groove in the coupling maintains a squeeze fit, regardless of commercial tube and pipe tolerances. Pressure in either direction of flow jams the seal into a positive fit. Made of type 304 and 316 stainless steel, units are for use at temperatures up to 275° F, depending upon corrosive agent involved, and for pressures up to 150 psi. Available from **Peter A. Frasse & Co.**, 16 Grand St., New York 13, N. Y.

For more details circle NED-6170 on enclosed inquiry slip

DO YOU KNOW? Covering months from July 1952 to July 1953 and decimal equivalents from 1/64 to 1 in increments of 1/64, new calendar is designed for wall hanging. It is offered free by Dayton Rogers Mfg. Co., 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

For more details circle NED-6171 on enclosed inquiry slip

LINEMASTER Treadlite

REVOLUTIONARY NEW FOOT SWITCH

3½ x 2⅝" x 1"
Not much larger than a pack of cigarettes!

Small, lightweight, efficient! *Treadlite* gives you TWO accurate switching operations activated by ONE treadle. Light pressure requirements prevent fatigue. For your new product planning, specify Linemaster's *Treadlite*, the compact, versatile foot switch housed in a smartly designed casing with slip-proof base, black crackle finish.

T-52-S—Two single pole, double throw switches; operated by one treadle; momentary contact only ..... $4.20 without cord*

Also available: single pole, double throw switch. T-51-S ..... $2.95 without cord*

* Cordsets available

Write TODAY for complete information. Send specifications for quotations on individual foot switch requirements. Over 20 models to choose from.

Another Outstanding Product by

LINEMASTER SWITCH CORPORATION
Dept. C—P.O. Box 312, Putnam, Conn.

LINEMASTER *the leader*

For more details circle NED-6172 on enclosed inquiry slip

Need Conveyor Chain? NOW

We're In Position To Make
IMMEDIATE DELIVERY
X458 Drop-Forged Rivetless
Conveyor Chain

Improved production and material conditions have enabled Jervis B. Webb Company to stock an adequate supply of X458 Chain—ready for immediate delivery—to meet your conveyor needs.

The No. X458 Drop-Forged Rivetless Chain for Trolley Conveyors (illustrated above) has the improved webbed side link which substantially stiffens it. Also, this type link prevents telescoping of the chain while in service. Simple and strong, it is cheaper and lighter per unit of ultimate strength than any other type of conveyor chain. It can be installed or removed by unskilled labor. Having no rivets, welds or bolts, X458 Chain requires no special or joining links and may be disconnected at any point, yet it is so designed that it cannot become disconnected while in service. No. X458 Chain is completely interchangeable with the Webb FIRST—the original No. 458 Chain designed in the early Twenties by Mr. Jervis B. Webb.

CONVEYOR ENGINEERS AND MANUFACTURERS
JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
FACTORIES IN DETROIT . . . LOS ANGELES . . . HAMILTON, ONT.

For more details circle NED-6173 on enclosed inquiry slip

New Jacques, Jr. CUTTERS

Speed Production! Make Cleaner Cuts!

TABLE MODEL
featuring automatic material-holder.

Ideal for cutting paper, plastics, rubber, fabrics and other light materials

Now, at low cost, you can increase cutting efficiency and production. Jacques, Jr. all-metal cutters are designed for cutting jobs which do not require large heavy-duty cutters—yet *do* require more ruggedness, speed, and accuracy than are found in ordinary light paper cutters.

Jacques, Jr. construction features add speed and efficiency to your cutting operations. Exclusive automatic material-holder (self-adjusting clamp) automatically comes down, as blade is lowered, to hold material to be cut. Adjustable gauge and steel rule (on table model) assure accurate cuts. Other features include high grade steel blades, spring tension cutting, and safety spring on blade handle (to prevent accidental cutting). Sturdy, all-metal construction stands up under continuous use.

BENCH MODEL

Attaches to your own bench. Cuts materials from continuous rolls or long strips. Perfect for many in-line production operations.

AVAILABLE IN TWO MODEL TYPES

Table model comes in 12", 16", 20", 24" and 30" sizes. Bench model (for your own bench) available in 24", 30" and 36" sizes.

Investigate the advantages of Jacques, Jr. cutters now! Write for descriptive circular giving complete information!

There's a Jacques shear or cutter for your every cutting need!

Let us know your cutting requirements and problems. We'll recommend the shear best suited for your use. Write for descriptive catalog page on each machine.

UNIVERSAL SHEAR — Cuts material quickly into clean, uniform strips—⅛" to 20" in width. (Six sizes available)

BENCH SHEAR — Cuts widths up to 10 ft. on your own bench. Extremely versatile! (Twelve sizes available)

POWER SHEAR — For intermittent or continuous cutting, up to 70 strokes per min. Adaptable for *any* production set-up.

OTHER SHEARS
• J-L Shear (lighter, less expensive adaptation of Universal Shear)
• Card Cutter (small, compact cutter)
• Bookbinder's Shear (for specific applications)

For faster, cleaner cutting through the years, specify only genuine Hobbs replacement blades, accessories, and repair parts.

HOBBS MANUFACTURING CO.
41 SALISBURY ST., WORCESTER 5, MASS.
EST 1883
Producers of Modern Machinery for Modern Industry
Jacques Hand and Power Shears, Slitters and Rewinders, Hobbs Autotronic and Tri-Power Die Presses, Paper Box Machinery and Touch-O-Matic Industrial Cutters.

For more details circle NED-6174 on enclosed inquiry slip

Be fresh Stay fresh

wear a DUPOR No. 40

THE RESPIRATOR THAT IS U. S. B. of M. APPROVED FOR TYPE "A" DUSTS

Guards against pneumoconiosis and silicosis producing dusts. Has over 40 sq. in. twin filter area. Sanitary face cloth. Soft rubber face mask. "Controlled-breathing" valves. Wearer has a panorama view with no blind spots. Unusual rubber, felt and plastic construction makes it extra durable, no denting or bending possible. Efficiency remains unimpaired even after rough treatment.

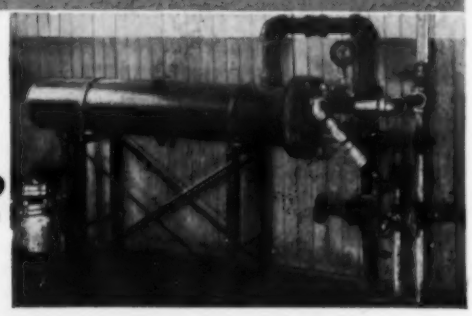
Sample sent $3.00 pp

H. S. COVER
South Bend, Ind.

For more details circle NED-6179 on enclosed inquiry slip

Better - Cheaper Way to get...

MORE HOT WATER



NO STORAGE TANK • NO COMPLEX PIPING

You can place compact General Instantaneous Heating Units almost anywhere in your plant. No major construction work to consider. Easily tapped into pipe lines—heat supplied by live or exhaust steam through the shell. Ideal boosters on storage systems. Avoid heat loss on long pipe lines. Extremely efficient—long service life. 23 sizes available for plant washrooms and industrial processes—4 to 300 g.p.m. Bronze heads, seamless copper tubing expanded into bronze tube sheet.

WRITE FOR NEW CATALOG 60
General Fittings Co., Dept. I, 123 Georgia Ave., Providence 5, Rhode Island.

GENERAL
Tankless and Indirect Water Heaters and Heating Specialties
Instantaneous Water Heaters

For more details circle NED-6180 on enclosed inquiry slip

Job-Proven PLASTIC ROCK FLOORS

A NEW FLOOR IN 48 HOURS!

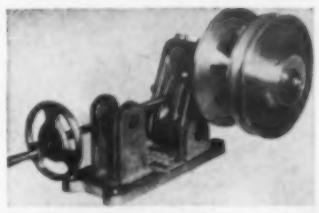
Save priceless production time! Renew old floors over the week-end to last for many years. Heavy traffic only packs denser. Non-skid, noiseless, spark-proof; bonds and feather-edges perfectly on concrete, wood or steel. Each Plastic Rock unit is complete; nothing else to buy; no guesswork; maintenance crew or contractor can apply.

Get free Bulletin N-7

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

For more details circle NED-6181 on enclosed inquiry slip

VARIABLE SPEED DRIVE
pitch of pulley can be changed



Employing variable pitch pulley principle, TeeCo light duty transmission is adjustable while operating. Turning of adjusting wheel changes tension on belts to change pitch diameters of combination middle pulley automatically. Speed is infinitely adjustable within range. Usable with any speed electric motor or gasoline engine, unit is merely bolted to frame between machine and its power supply. Made by **Turner Machinery Co.**, 3499 Terrace St., Kansas City 8, Mo.

For more details circle NED-6182 on enclosed inquiry slip

AIRBRUSH
operates at any angle

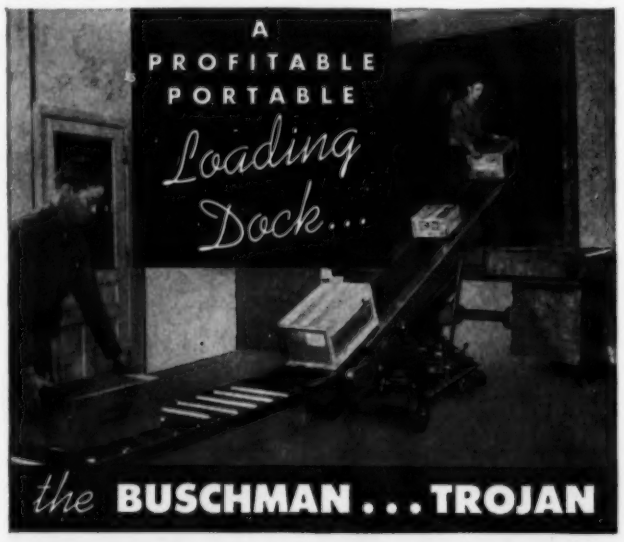
Self-filling like a fountain pen, the British-made Craftint-Conograph airbrush is nonspilling, nonspitting and can be operated at any angle. It can be adjusted from a coarse, heavy spray to a hairline control. Unit is self-cleaning and a filtering device prevents clogging. Use of lightweight polyvinyl tubing prevents "tube drag" while in use. Operation is on air pressure from 20 to 40 psi. Available from **Craftint Mfg. Co.**, 1615 Collamer Ave., Cleveland 10, O.

For more details circle NED-6183 on enclosed inquiry slip

RADIANT HEAT FLOOR MATS
warm workers in cold, drafty places

Industrial workers who encounter cold working conditions on the job, such as machine and crane operators, mine locomotive operators, or workers in warehouses, police or toll booths, can be kept comfortable with Uskon rubber mats having built-in radiant heating. On the surface, product looks like ordinary high grade rubber floor mat. Its heating element is a center layer of electrically conductive rubber which operates on 110-v current. Controlled by three-way switch, normal operating temperature is about 35 degrees above surrounding temperature, not quite hot enough to feel uncomfortable under foot. Made by **United States Rubber Co.**, Mechanical Goods Div., 1207 Rockefeller Center, New York 20, N. Y.

For more details circle NED-6184 on enclosed inquiry slip



Use it where you need it ... for loading and unloading... between times for stacking, boosting, conveying... alone or in combination with fixed and portable conveyors. The *Trojan* handles cartons, cases, boxes, crates or other packages up, down or on the level at 50 feet per minute speeds. Standard 12" width by 10, 15 or 19 feet long. One man maneuverability, easily adjustable loading and unloading heights.

Write for Bulletin 50.

THE E. W. BUSCHMAN COMPANY
Spring Grove at Winton Place
CINCINNATI 32, OHIO

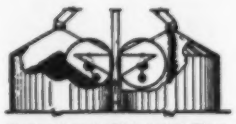
PRODUCE MORE ... FOR LESS on Buschman Conveyors

For more details circle NED-6185 on enclosed inquiry slip

"Stop-Go" FLOW CONTROL FOR BINS, HOPPERS, TANKS, ETC.

with TELLEVEL Bin-Level Control

Mount a TELLEVEL near the top and another near the bottom of your storage bin . . . As the material-level falls or rises, the light pendant is pushed aside . . . Automatically *starts or stops* conveyor, elevator or pump . . . Can be furnished for bulk materials or liquids.



Rising Level of Material Tilts Float-Ball and Stops Conveyor

Write for TELLEVEL Bulletin No. 1048.

STEPHENS-ADAMSON MFG. CO.
Tellevel—Bin Level Controls · Car Loaders · Saco Speed Reducers · SealMaster Ball Bearings · Car Pullers · Winches
12 RIDGEWAY AVE., AURORA, ILLINOIS

For more details circle NED-6186 on enclosed inquiry slip

C-D-F makes all three!
Round . . square . . rectangular
low cost SPIRAL TUBING

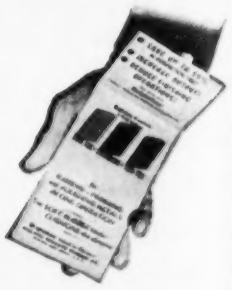
C-D-F, experts in insulation, makes spiral tubing by the mile . . . has eleven grades, prompt deliveries, good prices. Spiral Tubing is stiff, sturdy, crush resistant. Impregnated or plain. Perfect for coil bodies, structural spacers, even paint rollers!

All these shapes may be easily punched and fabricated by you or by C-D-F. *Write for samples, case histories of cost savings, complete mechanical and electrical specifications. Get the facts . . . write now!*

Continental-Diamond Fibre Company
NEWARK 30, DELAWARE

For more details circle NED-6187 on enclosed inquiry slip

Time-Savings in Finishing
. . . by the handful



For Working ALL METALS, PLASTICS, WOOD, GLASS, HARD RUBBER, PRESSED and LAMINATED MATERIALS and COMBINATIONS

Concerned with soaring time costs? Hard-to-lick finishing problems? Get these Brightboy samples that will show you the way to substantial savings! Brightboy will save and speed for you every day in a big way. Reason: It combines burring, finishing, cleaning, polishing into one time-saving operation; does countless jobs conventional abrasives cannot do—PLUS low-cost, "everyday" finishing. The unique action of Brightboy's *abrasive and rubber which work together* does the job—achieves time savings that frequently amount to fifty per cent!

Ask your dealer for the Brightboy introductory sample card illustrated above, containing samples in 3 textures; also for the Brightboy Catalog-Manual. Write us if he cannot supply you, or if you have any problems in which finishing is involved.

BRIGHTBOY INDUSTRIAL DIVISION
Weldon Roberts Rubber Co.
6th Ave. & No. 13th St.
Newark 7, N. J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

For more details circle NED-6188 on enclosed inquiry slip

FIRST CLASS
PERMIT NO. 36
Sec. 34.9 P. L. & R.
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
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Penton Building
CLEVELAND 13, OHIO

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Please send NEW EQUIPMENT DIGEST to me each month free of charge.

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CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

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Also send NEW EQUIPMENT DIGEST free to the following men in our company:

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Have You Filled In Your Name and Address?

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To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

6100	6150	6200	6250	6300	6350	6400	6450	6500	6550	6600	6650	6700	6750	6800	6850	6900	6950	7000	7050
6101	6151	6201	6251	6301	6351	6401	6451	6501	6551	6601	6651	6701	6751	6801	6851	6901	6951	7001	7051
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6145	6195	6245	6295	6345	6395	6445	6495	6545	6595	6645	6695	6745	6795	6845	6895	6945	6995	7045	7095
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6149	6199	6249	6299	6349	6399	6449	6499	6549	6599	6649	6699	6749	6799	6849	6899	6949	6999	7049	7099

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72

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees.....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

One man, with an S-A Box Car Loader, can make quick work of loading and trimming a box car. The loader operates without attention after it is placed in the car, and flow of material is started. This handy machine automatically loads and trims in a fraction of the time required by hand methods. Exposure of operator to dust is reduced to the minimum. Save time and manpower with this standard S-A portable loader . . . It handles loose granular material up to 2-inch lump size.

Write for Bulletin No. 948 and full details.

STEPHEN S-ADAMSON MFG. CO.

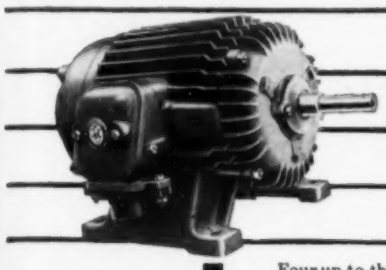
TELLEVEL—Bin Level Controls · Car Loaders · Variable Speed Reducers · Car Pullers · SealMaster Ball Bearings · Winches · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILLINOIS

For more details circle NED-6189 on enclosed inquiry slip

ACEC

Electric Motors are backed by



70 YEARS' DESIGNING AND ENGINEERING EXPERIENCE

NOW ON HAND
Integral Horsepower Electric Motors—conforming strictly to NEMA SPECIFICATIONS

FULLY GUARANTEED

MOTORS EXCEEDING 200 HP. BUILT TO ORDER

Four up-to-the-minute plants producing the finest type electrical equipment, that's ACEC — Ateliers de Constructions Electriques de Charleroi, Belgium.

And world-famous ACEC motors are now *immediately available* to American customers from warehouse stocks in the United States.

In addition, a network of ACEC Distributors and Service Shops, from coast to coast, is prepared to handle customers' service needs promptly and efficiently.

Whatever your motor requirements, write, wire, or telephone the nearest ACEC office or representative.

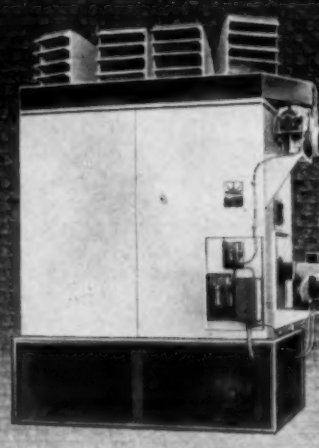
IMMEDIATE DELIVERY from NEW YORK • CHICAGO • KANSAS CITY NEW ORLEANS • DALLAS and LOS ANGELES Warehouses

BELGIAN ELECTRIC SALES CORPORATION
Main Office: ONE E. 53RD ST., NEW YORK 22, N. Y. • PLAZA 8-3105

BRANCHES AND AGENCIES: Los Angeles • San Francisco • Chicago • Kansas City • Cleveland • Houston • New Orleans • Pittsburgh • Louisville • Washington, D. C. • Youngstown • Savannah • Montreal • Puerto Rico • Mexico City

For more details circle NED-6190 on enclosed inquiry slip

THERMOBLOC



The finest Industrial Heater for your plant

The 2 million Btu output **THERMOBLOC** is low in cost, economical to operate. This direct-fired unit heater provides the ideal solution to industrial heating problems. Other **THERMOBLOC** sizes from 100,000 to 1,000,000 Btu's.

write for full details

THERMOBLOC DIVISION
PRAT-DANIEL CORPORATION
11-7 Meadow Street South Norwalk, Conn.

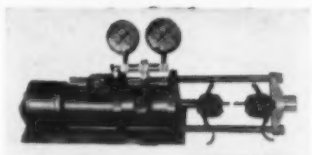
For more details circle NED-6191 on enclosed inquiry slip

VACUUM CLEANING ACCESSORY
extra tank for heavy volume jobs

Standard industrial vacuum cleaners can be adapted to all kinds of extra heavy volume vacuum cleaning, including furnace and boiler cleaning, without danger of clogging tank and filters, getting ashes in working parts or burning hoses, with the Add-A-Tank attachment. Attachments add any standard 30-gallon or smaller galvanized ash can on the suction line for wet or dry pickup. Hazardous areas can be cleaned with safety, as only ash can need be in the danger area. Parts, available individually, include: cover plate assembly with 5-ft hose; 15-ft metal hose assembly; extension pipes, flexible flue tool; flue scraper; wire brush tool. Made by **Multi-Clean Products, Inc.**, 2275-79 Ford Parkway, St. Paul 1, Minn.

For more details circle NED-6192 on enclosed inquiry slip

PORTABLE TENSILE TESTER
produces up to 4000-lb tension



Testing of spot welds, wire, strip steel, aluminum shapes, textiles, wood and plastics are some of the operations that can be performed with this hydraulic tensile tester. Having capacity up to 4000 lb, machine is powered by integral hydraulic pump. Valve with graduated dial permits uniform tests to be made at various loading speeds. Gages with maximum pressure hands indicate load accurately. Space between work grips is adjustable from 2 to 10 in. Safety devices are provided for both pressure and travel. Wedge type grips can be operated simultaneously with one hand while specimen is inserted with other hand. Made by **Cal-Testing Machine Co.**, 2735 S. Robertson Blvd., Los Angeles 34, Calif.

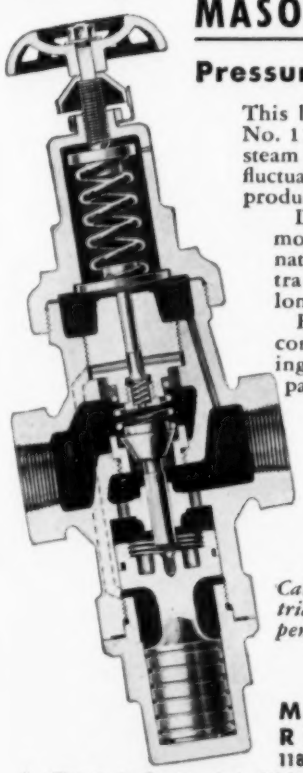
For more details circle NED-6193 on enclosed inquiry slip

DO YOU KNOW? There's a new 16-mm sound-color motion picture available for showing to industrial and engineering groups. Titled "Gaging for Profit", it deals with practically all known methods of gaging. Applications and use of mechanical gages, dial indicators and dial gages, electromechanical and pneumatic gages, automatic sorting devices and continuous measuring gages are covered. Film will be loaned for showings by Federal Products Corp., 1118 NR1 Eddy St., Providence 1, R. I.

For more details circle NED-6194 on enclosed inquiry slip

Supersensitive!

MASONEILAN No. 11
Pressure Reducing Valve



This better-than-ever Masoneilan No. 11 Reducing Valve pinpoints steam pressures. Even the slightest fluctuations in reduced pressure produce instantaneous response.

Dependable — superfinished moving parts practically eliminate sticking or corrosion. Extra sturdy construction insures long life.

Economical — maintenance consists of little more than keeping the moving parts clean. All parts may be removed for cleaning with the valve in the line.

Initial pressures up to 250 lbs. reduced to any desired pressure between 10 and 90 lbs. or 75 and 225 lbs. Sizes ½" to 2" with bronze body. (Also available in iron and steel.)

Call your Mason-Neilan Industrial Distributor for fast, dependable service.

MASONEILAN

MASON-NEILAN REGULATOR CO.
1189 Adams Street, Boston 24, Mass.

For more details circle NED-6195 on enclosed inquiry slip

Custom-engineered to meet your specific requirements, Wissco Metal Processing Belts are furnished in standard or special mesh constructions . . . in conventional and spiral weaves . . . and with rod reinforcements for high-temperature service. Supplied in correct metal or special alloy for resistance to heat, abrasion and chemical action.

For specific information write or phone our nearest sales office.

THE COLORADO FUEL & IRON CORPORATION – Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION – Oakland, California
WICKWIRE SPENCER STEEL DIVISION – Clinton, Massachusetts

WISSCO BELTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION

For more details circle NED-6196 on enclosed inquiry slip

International Stapling Machine saves $20,000 a year for UARCO

Uarco, Inc., Chicago manufacturer of business forms reports a savings of more than $1600 a month with an International Retractable Anvil stapling machine.

The stapler, a double-headed, air operated model priced at only $3400, is used to close filled cartons from the outside, top and bottom simultaneously. Daily volume is 2,500 cartons of varying sizes . . . in a 12 hour period.

International Stapling Machines will save you as much as 50% on shipping costs . . . write for additional details.

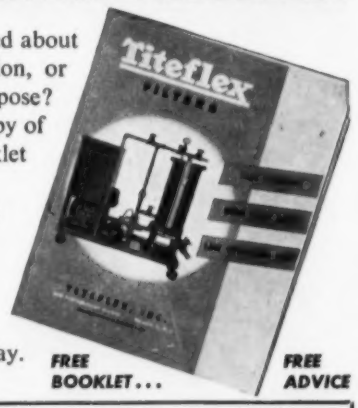
INTERNATIONAL STAPLING MACHINES
INTERNATIONAL STAPLE & MACHINE COMPANY
802 East Herrin Street, Herrin, Illinois

For more details circle NED-6197 on enclosed inquiry slip

REDUCE FILTRATION TROUBLES!

Need a filter but worried about filtration costs, operation, or suitability for your purpose? Then get your Free Copy of the Titeflex® Filter Booklet right away.

Ask for a Titeflex Engineer to set you straight on costs and equipment for your special needs. No obligation. Mail coupon today.



FREE BOOKLET . . . FREE ADVICE

Businesses served by Titeflex Filters include . . .
Chemical • Distilling · Electroplating · Soap • Cosmetics · Pharmaceuticals · Wine • Beverages · Machine Tool · Dry Cleaning · Paints & Lacquers · Water · Food Processing · Edible Oils · Food Extracts

Titeflex

Let Our Family of Products Help Yours

MAIL COUPON TODAY

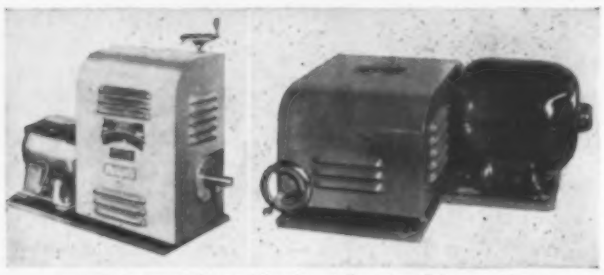
TITEFLEX, INC.
507 Frelinghuysen Ave., Newark 5, N. J.

☐ Please send me a copy of your Free Booklet about Titeflex Filters.

☐ We need the advice of a Titeflex Filtration Engineer . . . without obligation on our part.

NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE ____ STATE ____

For more details circle NED-6198 on enclosed inquiry slip



ALLSPEED upright and horizontal motor-driven units—both use Std. NEMA frame motors.

Instantaneous stepless speed control over whatever range you choose

With a Worthington Allspeed Motor Drive, you vary speed instantaneously and steplessly over exactly the range you need. You select the unit that covers the required range whether it's 2 to 1 (or less) or 16 to 1.

And with Worthington Allspeed's tandem-belt design, you get a *more compact unit, greater speed variation* (where necessary), and *longer life* plus these other features: built-in standard NEMA frame ball-bearing motor . . . provision for mounting in any position, for running in either direction . . . choice of model—upright or horizontal, enclosed or skeleton, with or without motor.

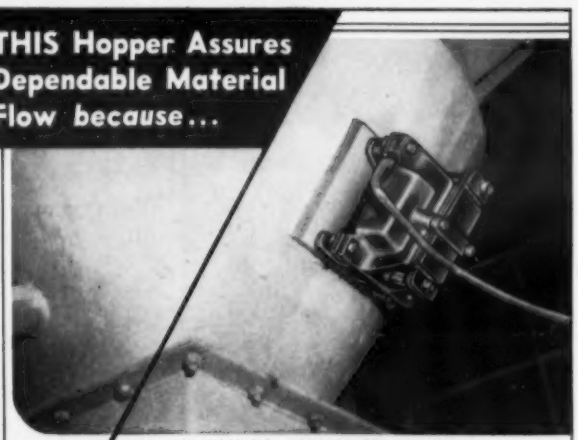
Write for details. Worthington Corporation, formerly Worthington Pump and Machinery Corporation, Allspeed Drive Division, Holyoke, Massachusetts. AS.2.5

WORTHINGTON

Allspeed Drives

▲ For more details circle **NED-6199** on enclosed inquiry slip ▲

THIS Hopper Assures Dependable Material Flow because...



Model V-60 Semi-Noiseless Vibrator eliminates material arching and plugging in hopper . . . saves time and equipment.

. . . its equipped with a

SYNTRON

ELECTRIC VIBRATOR

With Variable Control of Power

3600 controllable vibrations per minute keep even the most stubborn materials flowing freely thru bins, hoppers, chutes and screens ... of any size . . . WITHOUT THE HAMMERING AND RODDING AND POKING THAT WASTES MANPOWER AND DAMAGES EQUIPMENT.

Write for FREE Illustrated Folder

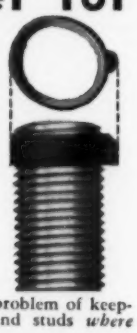
405 Lexington Ave.
Homer City, Pa.

SYNTRON CO.

▲ For more details circle **NED-6200** on enclosed inquiry slip ▲

A *Special* Fastener for Special Problems

Security Studloc



● Here is the Security Locknut! It provides an unequalled answer to general fastener problems. Grueling tests by unimpeachable sources have demonstrated that Security Locknuts retain their position regardless of vibration that would destroy the bolt. Security Locknuts can be removed and reused any number of times. If you have a fastener problem, specify "Security".

SECURITY has solved the problem of keeping adjusting screws, bolts and studs *where you want them!*

The Security Studloc can be adapted to provide a positive lock in counterbores and housings or it can be keyed into work to serve as a simple lock nut. Holds its position on a bolt, adjusting screw or stud in the face of vibration that will destroy the bolt. Can be readjusted, removed and replaced any number of times without distorting or damaging the bolt and without materially reducing its holding power. All load is carried by the threads of the tapped hole not by the Studloc.

A simple, elliptical, heat treated, spring retainer is of the highest quality spring steel possible to obtain. Available in bolt sizes ½ in. to 3 in. If you have a fastener problem challenge us to solve it! Send the coupon.

SPECIAL OFFER—Ask for a Security Thread Tolerance Chart. Spin the dial and you have your thread tolerance figures.

Security

The Nut You Can't Shake Loose

SECURITY LOCKNUT CORP.
North Ave. and 15th Ave.
Melrose Park, Ill.

Please send me without obligation:
☐ A Thread Tolerance Chart.
☐ We have a fastener problem and would like to know more about Security Locknuts.

Company Name .....
Address .....
Town ..... Zone ... State .....
Signed .....

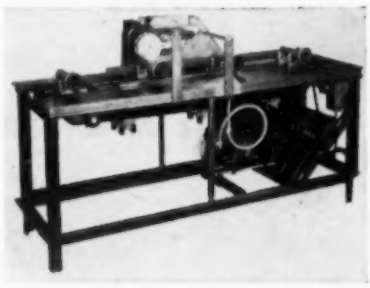
▲ For more details circle **NED-6201** on enclosed inquiry slip ▲

SMALL POWER ROLLER can be carried on small truck

Offered in two models with adjustable weights of 300 to 1200 lb and 375 to 1400 lb, this easily transported roller is powered by 2½-hp Briggs & Stratton air-cooled gasoline engine. Larger model has 15-gal sprinkler tank to minimize sticking of paving materials to rollers. Controls consist of tiller type steering bar and single forward-reverse lever. Manually set governor maintains constant speed up and down grades. Made by **Consolidated Industries, Inc.,** 515 Mixville Rd., West Cheshire, Conn.

▲ For more details circle **NED-6202** on enclosed inquiry slip ▲

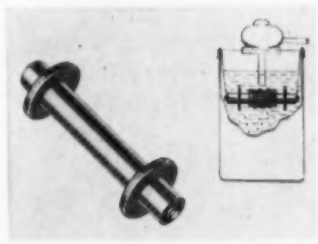
MARKING MACHINE imprints rocket shell periphery



Interchangeable rubber type or mats are used by a high speed marking machine to imprint the periphery of rocket shells with desired information. Easily operated machine uses aniline inking system to mark 2000 units per hour. Made by **Industrial Marking Equipment Co.,** Dept. NED, 454 Baltic St., Brooklyn 17, N. Y.

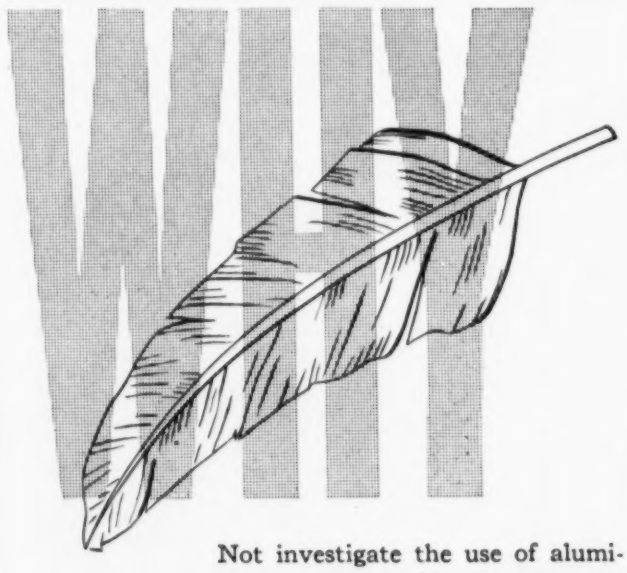
▲ For more details circle **NED-6203** on enclosed inquiry slip ▲

COOLANT PUMP MAGNET removes floating steel particles



Intended for tool room grinders and lathes and light production drilling and tapping machines, model 121 coolant pump magnet is suspended under the pump intake in the coolant tank. The 1⅛ x 8-in. unit traps all floating steel particles instead of allowing them to be pumped back into the system to damage work and tools. It accumulates a mass of chips 4½ in. long and 1 in. thick around its circumference which is removed by pushing a wiper ring to the opposite end of the tube. Price is $16.50. Larger sizes are made to order by **Multifinish Mfg. Co.,** Magnetool Div., Dept. 457, 2114 Monroe Ave., Detroit 7, Mich.

▲ For more details circle **NED-6204** on enclosed inquiry slip ▲



Not investigate the use of aluminum or magnesium castings on *your* product?

Almost a half-century of experience producing quality Well-Cast light metal castings in sand, semi-permanent and permanent mold-Well-Made Wood and Metal Patterns.

THE WELLMAN BRONZE & ALUMINUM CO.

DEPT. 15, 12800 SHAKER BLVD., CLEVELAND 20, OHIO

▲ For more details circle **NED-6205** on enclosed inquiry slip ▲

HOMER MAGNETIC SEPARATORS Cut Handling and Sorting Costs!

Homer Magnetic Drum Type Separators are saving valuable hours every day in many leading industries by eliminating tedious hand sorting of ferrous from non-ferrous materials. They are used in sorting plastic pieces from ferrous parts; for removing abrasives from finished ferrous tumbling barrel operations and for sorting ferrous from non-ferrous scrap metal. There are many other industrial applications where Homer Magnetic Drum Type Separators can help to cut down costly, time consuming operations. If you have such an application—write or wire us today—there is no obligation for our recommendation.

The HOMER MANUFACTURING CO., Inc.
Dept. I-25 LIMA, OHIO

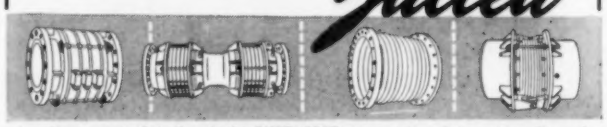
Producers of Magnetic Separator Equipment Since 1923

▲ For more details circle **NED-6206** on enclosed inquiry slip ▲

FOR YOUR EXPANSION PROBLEM...

If you are faced with an expansion problem, chances are you'll find the Zallea Expansion Joint best suited to your needs in this handy, fact-filled folder. It describes completely the full line of Zallea Expansion Joints—from a small 4" connector to a huge 30-foot specially fabricated wind tunnel unit. Write for a copy today. Zallea Brothers, 818 Locust Street, Wilmington 99, Delaware.

Zallea



▲ For more details circle **NED-6207** on enclosed inquiry slip ▲

for amplifying SMALL d-c Voltages and Currents

The General Radio Type 715-A Direct Current Amplifier in conjunction with the Esterline-Angus 5 ma recorder, has been used for recording life tests on vacuum tubes, studying sound and vibration intensities, insulation resistance of electrical machinery, and for a very wide variety of industrial and research problems. It can be used to operate from photoelectric cells, resistance strain gauges, resistance thermometers and other devices.

RANGE: *four give outputs of 5 ma across 1,000 ohms for input voltages of 0.1, 0.2, 0.5, and 1 volt.* **ACCURACY:** *1% of full scale.* **INPUT CIRCUIT:** *Input resistance is variable from 100 to 10,000,000 ohms.* **OUTPUT CIRCUIT:** *output resistance is selected by switch so that instrument always works into 1,000 ohms.* **METER CIRCUIT:** *bridge-type balancing network with voltage regulator tube. Coarse and fine adjustment for meter zero.* **STABILITY:** *three pentodes in degenerative circuit provide high stability. Normal variations in a-c line voltage, temperature and humidity have no effect on meter readings.*

GENERAL RADIO Company
275 Massachusetts Avenue
Cambridge 39, Mass.
NEW YORK CHICAGO LOS ANGELES

Type 715-AM
D-C Amplifier (In Walnut Cabinet) . . . $320.00

▲ For more details circle **NED-6208** on enclosed inquiry slip ▲

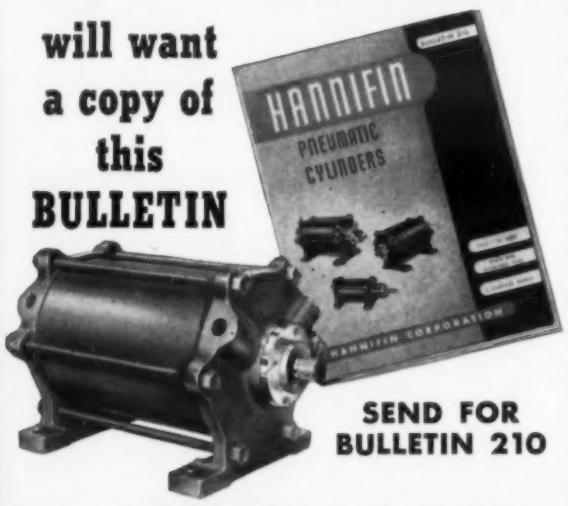
A simple request will bring you a sample of one of the most amazing materials ever developed by science. It is Tufflex, the fiber felt, and it's cutting production costs—adding quality—in many industries today. Tufflex is downy soft—amazingly resilient. It cushions. It withstands heavy impact blows. It insulates. It deadens sound. It is easily fabricated to any size or shape. Tufflex is available in a variety of densities and thicknesses—and in moisture resistant and fire retardant forms. Learn more about the many new uses for Tufflex—send today for your sample and complete information. Wood Conversion Company, Dept. 127-72, First National Bank Bldg., St. Paul 1, Minnesota.

TUFFLEX* A Product of Weyerhaeuser

*REG. U. S. PAT. OFF.

For more details circle NED-6209 on enclosed inquiry slip

EVERY ENGINEER will want a copy of this BULLETIN



SEND FOR BULLETIN 210

It's easy to get the right cylinder for even the most special jobs when you use Hannifin's big handbook on PNEUMATIC CYLINDERS. 49 pages of helpful specification and engineering data, complete with diagrams and dimensions. The Hannifin line is complete! 6 standard mountings . . . many combination mountings . . . adjustable cushions at either or both ends . . . 2 types of pistons . . . bores to 16". Exclusive construction features assure trouble-free, efficient operation. Send for Bulletin 210. Hannifin also builds custom cylinders in quantity to special design. *Bring us your cylinder problems.*

HANNIFIN

1127 S. Kilbourn Ave., Chicago 24, Ill.

For more details circle NED-6210 on enclosed inquiry slip

good hunting begins *here*

Good hunting with missiles begins with accurate launching. To overcome unpredictable performance of some connectors, Wiggins designed this solenoid actuated, leakproof coupling. It can be actuated by electric, hydraulic or pneumatic controls and has performed unfailingly for more than one year.

OPERATION—Both halves self sealing; nipple goes with missile, mating half remains on ground. MATERIAL—Aluminum alloy. LINE SIZES—3/8", 1/2", 5/8" in production. Write for engineering and performance data.

Wiggins

INST-O-MATIC COUPLINGS

Aircraft Division
E. B. WIGGINS OIL TOOL CO. Inc.
3424 E. Olympic Blvd., Los Angeles 23

For more details circle NED-6211 on enclosed inquiry slip

MASONRY CUTTING BLADE bends and twists without breaking

Center of this Valsafe masonry cutting blade is composed of nylon cloth while outside portion contains specially treated and wound thread. This combination strengthens blade so that it can be bent and twisted without breaking. Wheel is offered in many diameters and arbor holes for use on most cutting equipment. It is most practical on hand electric saws for routing old mortar joints, as well as for cutting masonry, clay, concrete or stone products. Made by **Victor Engineering Corp.**, Dept. NED, 27 Maplewood Ave., Philadelphia 44, Pa.

For more details circle NED-6212 on enclosed inquiry slip

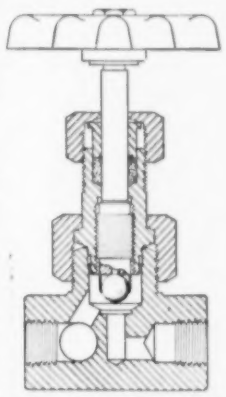
SMALL AREA FLOOR MACHINE is easily operated by woman

Designed for small area floors such as in plant offices, salesrooms and small businesses, this 11-in. Utility floor machine can scrub, polish, buff, wax and steel-wool floor to a high gloss. Portability and ease of operation make it practical for women operators. In use, handle can be lowered for operation under beds, tables or furniture. When stored, handle will stay upright to save space. Training is not necessary to get professional results. Made by **Kent Co.**, 312 Canal St., Rome, N. Y.

For more details circle NED-6213 on enclosed inquiry slip

BALL VALVE for pressures to 3000 psi

Stainless steel ball which closes into a machined conical seat in 1/4-in. ball valve provides a tight shutoff at working pressures up to 3000 psi. Ball, retained in the end of the stem, is free-rolling so that every closing brings a new surface into contact with the valve seat. Alignment of ball to seat is piloted by a forged steel union type bonnet. The long-stroke stem and packing gland are also made of stainless steel. Packing is preformed graphited asbestos with a plastic binder and can be replaced without shutting off line pressure. Straight-through and angle types are offered with two and four connections. Made by **Foxboro Co.**, 134 Neponset Ave., Foxboro, Mass.



For more details circle NED-6214 on enclosed inquiry slip

ACROMARK

STEEL STAMPS of PRECISION MADE BY THE MAKERS OF MARKING & NUMBERING MACHINES, NAME-PLATE STAMPING MACHINES COLOR FILLING MACHINES, PRINTING, HOT STAMPING AND THE GREATEST LINE OF MARKING EQUIPMENT IN AMERICA.

THE ACROMARK COMPANY
7-11 MORRELL ST., ELIZABETH, NEW JERSEY

For more details circle NED-6215 on enclosed inquiry slip

Chip Away... PAINT RUST SCALE

with AURAND CLEANING TOOLS

Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.

Two sizes in electric or pneumatic models.

For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-6216 on enclosed inquiry slip

HERC-ALLOY SLING CHAINS

PREFERRED . . . because of proved advantages in use

Production Executives and Safety Directors look for many things in a sling chain—greatest strength, maximum safety, lighter weight, handling ease, resistance to wear, minimum cost against service life.

Because they found all these advantages in HERC-ALLOY by on-the-job experience, it became a matter of course to prefer and specify HERC-ALLOY Sling Chains.

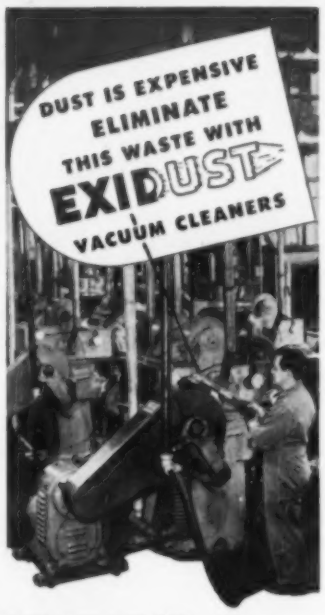
Write for illustrated Data Book No. 3 which contains helpful information on sling chain selection and use.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corp.)

GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
District Offices: New York • Chicago • Cleveland

Other Factories at Angola, N. Y., Dixon, Ill., St. Catharines, Ont., Can., and Johannesburg, South Africa.

For more details circle NED-6217 on enclosed inquiry slip

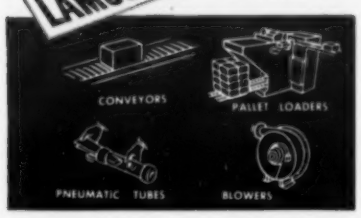


Plant fire or explosion . . . employee sickness or injury . . . machinery damage or product contamination are but a few of the hazards of dust that make dust an expensive waste.

With Exidust on the job, the hazards just do not exist. Powerful suction action of Exidust Cleaners pick up any material—soot or sand . . . flour or coal dust . . . grime or metal bits on any floor, wall, ceiling or other surface.

Built around a centralized Billmyre Vacuum Producer and separator-filter tank with inlet values strategically located on each floor, the Exidust Cleaners are custom engineered to meet individual plant requirements.

In use for over 30 years in practically every industry is your assurance that Exidust will not only operate efficiently in your plant but economically, too. Send for Exidust Bulletin D-5. Write: Lamson Corporation, Billmyre Blower Division, 550 Lamson St., Syracuse 1, N. Y. Offices in principal cities. Consult your Redbook.



For more details circle **NED-6218** on enclosed inquiry slip

30 DAY DELIVERY

HOW TO SPEED PRODUCTION

HOW TO SAVE ⅓ INSTALLATION SPACE

HOW TO GET MORE BORE POWER

HOW TO SAVE MONEY

Use Dependable, Powerful

O-M CYLINDERS

AIR—WATER—HYDRAULIC

In full range of sizes (1½" to 8" bores). All machined steel with bearing bronze throughout. Interchangeable parts and mounting brackets.

FREE CATALOG Brand new! 28 pages of specifications, diagrams, and parts listing.

FREE TEMPLATES Complete set. Shows all cylinders and mounting brackets, ½ scale.

Write today to

ORTMAN MILLER MACHINE CO.

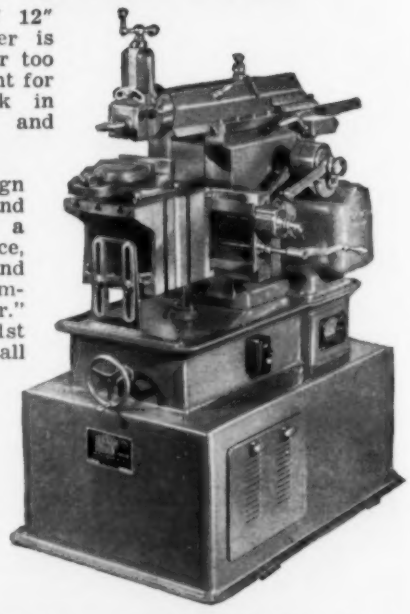
1222 150th St., Hammond, Indiana

For more details circle **NED-6219** on enclosed inquiry slip

Big Shaper Performance Small Shaper Price

The SHELDON 12" Back-Geared Shaper is neither too big, nor too small. It is just right for most shaper work in most tool rooms and shops.

In weight, design features, capacity and performance, it is a "big shaper." In price, operating cost and floor space, it resembles a "small shaper." It is the logical 1st shaper for the small shop and a cost-cutting tool in multiple installations in large plants.



Write for Catalog.

SHELDON
CHICAGO U.S.A.

SHELDON MACHINE CO., Inc., 4215 N. Knox Ave., Chicago 41, Illinois

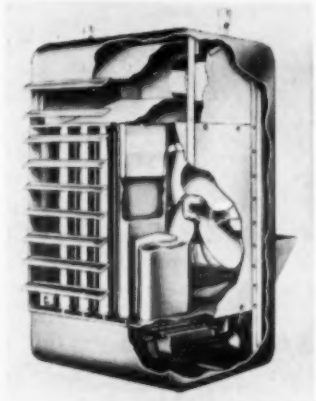
For more details circle **NED-6220** on enclosed inquiry slip

FIRE EXTINGUISHING HEAD protects stored volatile materials

Used as standard automatic sprinkler for rooms storing hazardous volatile materials, this Protecto-Spray extinguisher reduces ceiling scorching and checks fire with only a small amount of water. Extinguisher disperses extremely fine water vapor to attack the flame itself. By interposing inert water vapor molecules between oxygen and hydrocarbons, mixture is diluted until it is too lean to burn. Also, as flame vaporizes the water droplets, its heat is diverted from flammable materials and further combustion is thus forestalled. Extinguishers are available to produce wide range of water droplets and are approved by Factory Mutual and Underwriters' Laboratories. Made by **Grinnell Co.**, 277 W. Exchange St., Providence 1, R. I.

For more details circle **NED-6221** on enclosed inquiry slip

UNIT HEATERS gas fired, in five models



Bearing AGA approval for natural, mixed, manufactured and propane gases, five models in line of suspended type unit heaters have input range of from 55,000 to 200,000 Btu per hour. An individual burner is provided for each heat exchanger tube. Each tube has steel baffles inside for maximum heat transfer, while external baffles cause turbulence and radiate heat to air flowing through the heater. Individually adjustable louvres, and overlapping blade type electric fan are provided. Fan can be used to circulate air in warm weather. Safety pilot burner, safety pilot switch, solenoid valve and vent connection are incorporated. Made by **National Radiator Co.**, 301 Central Ave., Johnstown, Pa.

For more details circle **NED-6222** on enclosed inquiry slip

DO YOU KNOW? There probably is an important spot in your manufacturing processes for optical gaging. Just how optical gaging works and where it is being used in mass production and testing is depicted interestingly in 16-mm sound motion picture. The many possibilities of applying Kodak contour projectors for precise measurement or gaging of intricate parts are explained pictorially. This film, "Optical Gaging" is available on loan from Engineer Specialties, 980 Ellicott St., Buffalo, N. Y.

For more details circle **NED-6223** on enclosed inquiry slip

ENAMELSTRIP

STEEL · ALUMINUM · BRASS · PRE-FINISHED COLOR COIL

assures a perfect finish

before fabricating

You can easily cut production time and cost with Enamelstrip, the continuous-feed, pre-colored metal coil. Leading manufacturers of metal products are using it with outstanding results in a wide variety of items. Enamelstrip's exclusive, flexible finish withstands the stresses of drawing, bending and forming without cracking or peeling. Many companies have entirely eliminated their finishing departments! Any metal in any finish will be coated and slit to your own specifications.

Write TODAY for detailed color bulletin.

THE COATED COIL CORPORATION

507 West 30th Street, New York 1 • LOngacre 5-3161

For more details circle **NED-6224** on enclosed inquiry slip

Compact Power for Low Speeds

NEWEST OF ALL MOTORS

RIGHT ANGLED PYRAMIDAL BASE CANTILEVER DESIGN 20 TO 155 RPM ¼ TO 3 H.P.

New line of right-angled, worm-geared low speed motors—**Type GW Syncrogears.** Cantilever design protects gear alignment by preventing distortion of gear and motor housing. Rigid one-piece pryamidal base absorbs mounting stresses. "Spread-eagle" feet insure utmost stability. Parabolic contours lend graceful appearance. Compact "short hitch", of special appeal to Design Engineers.

TYPE GW **U.S. SYNCROGEAR**

Get this *FREE* BULLETIN

Just off the press—profusely illustrated Bulletin presents complete details with multi-color illustrations. Various types and sizes. Full of facts how to apply right-angle power for longer life.

U. S. ELECTRICAL MOTORS Inc.

Los Angeles 54, Calif. Box 2058 or Milford, Conn.

For more details circle **NED-6225** on enclosed inquiry slip

6 REASONS WHY

SHERARDUCT RIGID STEEL CONDUIT *is better*

Write for our catalog. **National Electric Products Corp. 1353 Chamber of Commerce Building, Pittsburgh 19, Pa.**

National Electric Products

EVERYTHING IN WIRING POINTS TO

PLANTS IN AMBRIDGE, PA. • TORRANCE, CALIF. ELIZABETH, N. J.

For more details circle **NED-6226** on enclosed inquiry slip

SURPRISING SAVINGS

Reported by Users of

STANDARD PNEUMATIC TUBE SYSTEMS

Safe — swift delivery by "AIR" of messages . . . money . . . merchandise!

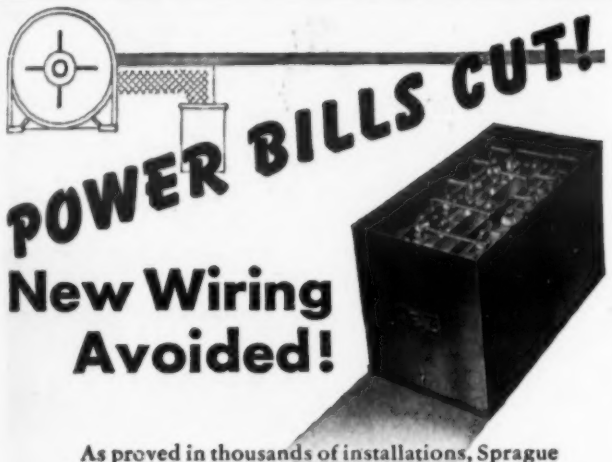
Savings as high as $10,000 in 9 months' time are reported by users of Standard Pneumatic Tube Systems — filling orders, moving merchandise, money, messages, records, between departments. Reduce messenger and telephone service. Can be installed for a wide range of needs in stores, warehouses, manufacturing plants, offices. Write for Bulletin No. 11 and complete information — address Dept. NED752.

STANDARD CONVEYOR CO.
North St. Paul 9, Minn.

Write for Bulletin No. 11 — Standard Pneumatic Tube Systems. Address Dept. NED752.

Standard GRAVITY & POWER CONVEYORS

For more details circle NED-6227 on enclosed inquiry slip



POWER BILLS CUT!

New Wiring Avoided!

As proved in thousands of installations, Sprague Power Factor Capacitors installed *right at each piece of inductive electrical equipment* insure maximum power cost savings, guarantee maximum cost-saving flexibility for future moves and expansion. Power factor on each piece of equipment is corrected *to the maximum.* Changes or additions can be made as *they are required.* New wiring, new switch gear, new transformers can be avoided. *Existing electrical circuits can handle bigger loads.*

Write for 28-page POWER FACTOR CORRECTION GUIDE
SPRAGUE ELECTRIC COMPANY, 183 Marshall St., North Adams, Mass.

SPRAGUE POWER FACTOR CAPACITORS

For more details circle NED-6228 on enclosed inquiry slip

FOR A TOUGH NUT THERE'S NOTHING LIKE TASGON

Tasgon is your quickest, most penetrating rust solvent! Cuts through rust, gummed up oil and grease, hardened paint . . . loosens rusty or frozen nuts, bolts, couplings, fittings, any metal connections. Saves time, labor, and broken parts.

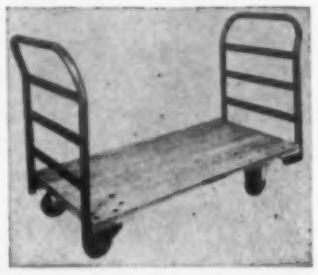
Tasgon comes in convenient 3 oz. cans for mechanics tool kits and in pints, quarts and gallons for shop and field use.

Write Today for a free sample can of Tasgon.

Samuel Cabot Inc.
732 Oliver Bldg., Boston 9, Mass.

For more details circle NED-6229 on enclosed inquiry slip

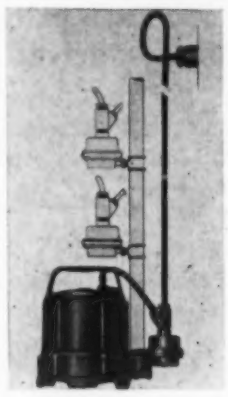
PLATFORM TRUCKS
carry loads from 750 to 1500 lb



Platforms of these Bantamweight hand trucks are made of tongued-and-grooved seasoned oak reinforced with cross battens and are standard in 24 x 42, 27 x 48, 27 x 54 and 30 x 60-in. sizes. Running gear consists of two Lockweld double ball race, swivel casters plus two steel rigid casters. Trucks are available with either one or two offset pipe racks and with vulcanized rubber tired, solid rubber or semisteel wheels. Trucks carry loads ranging from 750 to 1500 lb depending on size and type of wheel. Made by **Fairbanks Co.,** Dept. 43, 395 Lafayette St., New York 3, N. Y.

For more details circle NED-6230 on enclosed inquiry slip

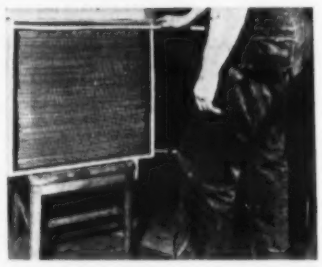
SUMP PUMP
has automatic water level switch



Water level at which sump and circulating pumps will turn on is automatically controlled by switch used with submersible Kenco pump. Switch and pump can be set to suit desired operating conditions, thus keeping operating cycles to a minimum. Pump can be placed on blocks to raise it if it is desired that a certain amount of liquid remain in tank or sump. It operates at any practical depth and has capacities up to 3300 gph at 10-ft head. Made by **Kenco, Inc.,** 1125 N. Ridge Rd., Lorain, O.

For more details circle NED-6231 on enclosed inquiry slip

AIR FILTER
removes 0.3-micron particles



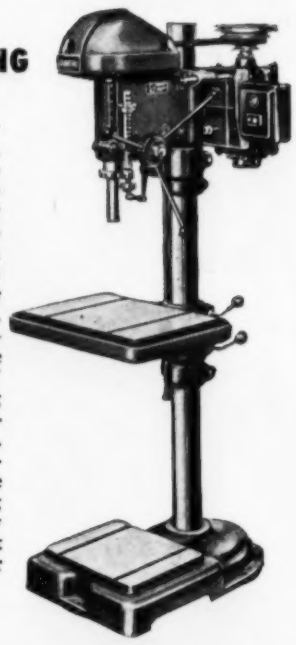
Said to be at least 99.95 per cent efficient against particles as small as 0.3-micron, Ultra-Aire space filter removes even tobacco smoke particles. Originally developed to remove radioactive contamination from air, filter has 46,000 sq in. of filter media in the 1000-cfm size. Other sizes made are 50 and 500 cfm. Effective service life, when protected by a roughing filter, is about 1½ years. Sizes, according to capacity, are 8 x 8 x 5⅞ in., 24 x 24 x 5⅞ in. and 24 x 24 x 11½ in. Offered by **Mine Safety Appliances Co.,** 220 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle NED-6232 on enclosed inquiry slip

Atlas CLAUSING PRECISION MACHINE TOOLS DIVISION ATLAS PRESS COMPANY KALAMAZOO, MICHIGAN

18" HEAVY DUTY DRILL PRESS

. . . FOR BETTER HEAVY DUTY DRILLING



Get these important new drilling advantages with a Clausing 18" Drill Press. The 6½" spindle travel gives bigger job capacity, permits better use of production chucks. Drilling capacity: ¾" in steel, 1" in cast iron. Spindle nose is No. 3 MT. There's 6" to 13" *more* capacity from spindle to table. Spindle is bigger, stronger — handles larger tools. Exclusive vernier control provides .001" depth accuracy. Positioning mechanism saves set-up time — moves *both* head and table. Massive construction, precision-machining throughout, and the smoothness of 5 ball bearing races insure exacting accuracy on every operation. Contact your Clausing distributor, or write for catalog.

CLAUSING DIVISION
ATLAS PRESS CO., 715 N. Pitcher St., Kalamazoo, Mich.

For more details circle NED-6233 on enclosed inquiry slip

steel coming up . . .

costs going down for Modern

Modern Tool & Die, Inc., Cleveland, O., uses thoroughly *modern* handling methods throughout their plant. Shown above is their Robbins & Myers 7½-ton power controlled traveling crane which handles raw stock into storage and delivers it to the machine bays. In addition "Modern" uses a 5-ton R & M traveling crane on transport and assembly work in the machine bay, and four R & M "I" hoist-equipped jib cranes for handling stock into and out of machines, and for assembling components. "Modern" reports—no maintenance problems—handling costs away down over previous methods—and all employees welcoming R & M help because it increases their production time—decreases the labor of handling dies and parts.

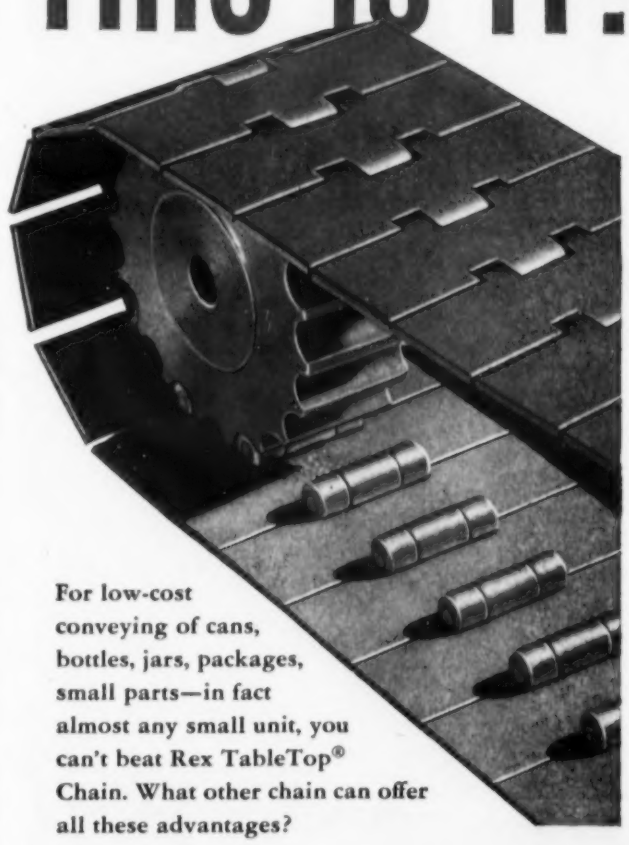
Perhaps some features of this successful R & M installation answer your handling problem. Your nearby R & M representative has detailed data on this and many other cost and time saving R & M installations. He can help reduce handling costs in your plant. Write for Bulletin N72D.

TAKE IT UP WITH ROBBINS & MYERS INC

HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

For more details circle NED-6234 on enclosed inquiry slip

THIS IS IT!



For low-cost conveying of cans, bottles, jars, packages, small parts—in fact almost any small unit, you can't beat Rex TableTop® Chain. What other chain can offer all these advantages?

1. **Simple as a door hinge—only two parts—link and pin.**
2. **Smooth transfer—short opening between links—will not catch and trip containers—slides freely under blocked containers.**
3. **Easy to clean—no pockets to catch foreign matter and encourage bacteria.**
4. **Easy to couple and detach—fits into existing tracks.**
5. **Unique sprocket and hinge joint mean wider bearing area . . . longer chain life.**

Compare TableTop with other types of conveying methods. We feel sure you'll agree that TableTop is the low-cost, long-life, efficient way to handle it. Our bulletin 51-60 contains all the details on this great chain. Send for it today. Chain Belt Company, 4686 West Greenfield Ave., Milwaukee 1, Wisconsin.

CHAIN BELT REX COMPANY ®

Chain Belt COMPANY OF MILWAUKEE

Atlanta • Baltimore • Birmingham • Boston • Buffalo • Chicago
Cincinnati • Cleveland • Dallas • Denver • Detroit • El Paso • Houston
Indianapolis • Jacksonville • Kansas City • Los Angeles • Louisville
Midland, Texas • Milwaukee • Minneapolis • New York • Philadelphia
Pittsburgh • Portland, Oregon • Springfield, Mass. • St. Louis
Salt Lake City • San Francisco • Seattle • Tulsa • Worcester

For more details circle NED-6235 on enclosed inquiry slip

This free booklet tells why

DISSTON

can make your

SPECIAL STEEL PARTS

... accurately ... economically!

In this booklet are pictured the completely integrated production facilities of the DISSTON CUSTOM PARTS PLANT ... from skilled engineering ... through actual steel manufacture and heat treating ... to final precision machining and inspection.

These facilities are *yours* to use—to cut costs and eliminate headaches in the production of replaceable heat-treated parts to your own exacting specifications. The booklet also illustrates typical parts the DISSTON CUSTOM PARTS PLANT has produced for other manufacturers and outlines the information required when forwarding an inquiry or an order. Send for it today! No obligation, of course.

HENRY DISSTON & SONS, INC.
529 Tacony, Philadelphia 35, Pa., U.S.A.
(Canadian Factory: Toronto 3, Ont.)

▲ For more details circle **NED-6236** on enclosed inquiry slip ▲

BAUGHMAN

CONVEYOR ASSEMBLIES

Handle your bulk materials at the lowest cost per ton with Baughman "Standardized" units. All drives and accessories designed to your individual requirements, yet manufactured in sectional assemblies to provide an efficient, economical plant operation at a much lower initial investment. Building all types of conveyors, elevators and unloaders, Baughman can provide a complete, well balanced, smooth operating plant that will give you longer years of service. All Baughman equipment is carefully engineered to insure satisfaction in every installation.

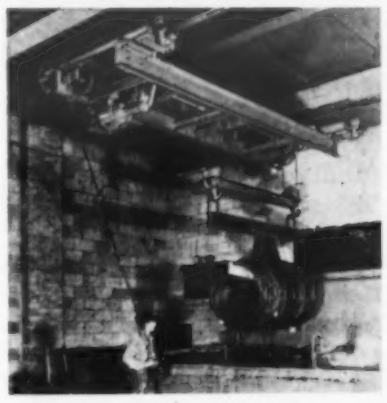
The principle of sectional assemblies used in fabricating Baughman Conveyors and Elevators makes it simple for your own men to assemble, move, lengthen or shorten with great saving in erection costs.

Write for complete information and the name of your nearest Baughman Distributor.

BAUGHMAN MFG. CO., INC.
177 ARCH STREET, JERSEYVILLE, ILLINOIS

▲ For more details circle **NED-6237** on enclosed inquiry slip ▲

TWIN-HOOK CRANE
controlled from pushbutton station

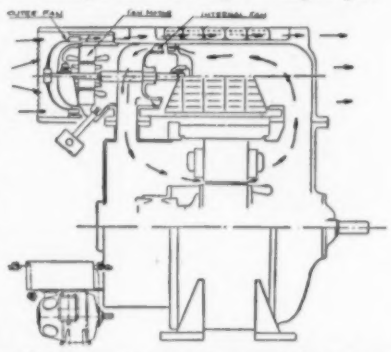


Lifting speed of this 3-ton Electrolift twin-hook hoist mounted between the end trucks of an American MonoRail crane is 24 fpm with a 6-ft spread between hooks. Special anchor type hooks quickly engage with hairpin hooks carrying wire coils. Crane is equipped with rubber wheel drive for propulsion at 125 fpm. All movement is controlled from pendant pushbutton station. Made by **American MonoRail Co.**, 13116 Athens Ave., Cleveland 7, O.

▲ For more details circle **NED-6238** on enclosed inquiry slip ▲

HEAT EXCHANGER COOLED MOTOR
up to 150-hp totally enclosed units adapted to adjustable speed drives

Integral heat exchanger built into this Dual-Cooled direct current motor permits use of totally enclosed construction in sizes as large as 150 hp. Ample protection is afforded from adverse surrounding atmosphere in these motors which are especially applicable to company's all-electric variable speed drive installations. Motors operate efficiently over ranges of 200 to 1800 rpm and in some cases for speed ranges as high as 100 to 1.



Sectional cast aluminum heat exchanger has internal and external fins for maximum heat dissipation. Clean air is circulated at 2900 fpm through motor windings and inner passages of heat exchanger by small independent induction motor driving both internal and external air circulating fans. This motor is mounted in heat exchanger housing on top of main motor, and external fan draws room air over external fins of exchanger at 3300 fpm. External fins are practically self-cleaning, but cover is removable for cleaning if needed.

Because cooling efficiency has been increased, use of smaller motors for a given horsepower load is feasible. Motors are approved by Underwriters and Bureau of Mines for use in hazardous atmospheres. Made by **Reliance Electric & Engineering Co.**, 1082 Ivanhoe Rd., Cleveland 10, O.

▲ For more details circle **NED-6239** on enclosed inquiry slip ▲

The liquid content in the formula so carefully developed in your laboratory can be exactingly controlled in production when Rockwell meters are assigned to the job. You'll get the highest measurement accuracy while saving materials, labor and money. In addition your accountants will gainfully use the records Rockwell meters provide for inventory and cost control. Write for full details.

Sizes ⅝" to 3" in a variety of suitable materials. Option on type of register. Automatic shut-off control available.

ROCKWELL MANUFACTURING COMPANY
Dept. C-4, 400 N. Lexington Ave., Pittsburgh 8, Pa.

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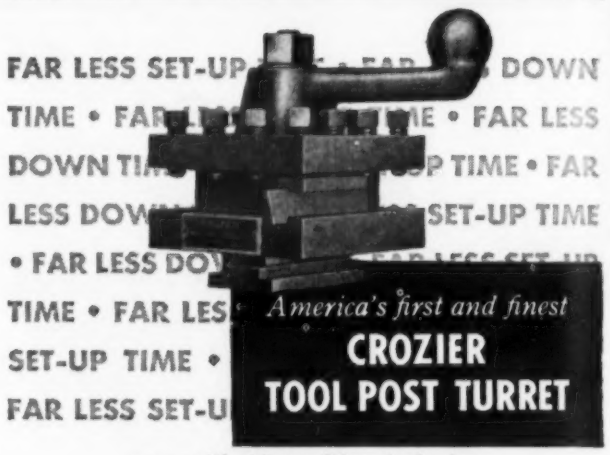
Take surface temperatures quickly, accurately... with the

The handy Alnor Pyrocon is unequaled for quick, accurate reading of all surface temperatures ... whether surfaces are metallic or non-metallic, flat or curved. Accurate temperatures are easily understood on the Pyrocon's direct reading scale face ... without interpolation or need of conversion tables. A wide selection of thermocouples and extension arms permits adaptation to many types of service. For complete details and prices, send for Bulletin No. 4257. Illinois Testing Laboratories Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle **NED-6241** on enclosed inquiry slip ▲



now with 12 position indexing

12 position indexing now makes possible the alignment with work at any thirty degree increment.

This is only one of the outstanding features developed by the first and largest manufacturer of turrets for small lathes. Other features include built-in cut-off tool and holder and positive rapid indexing. All wearing parts are hardened and precision fit. They are available in three sizes.

Switch to Crozier Tool Post Turrets today. Save as much as 75% set-up and down time in lathe operations. In Crozier, you have America's precision-built tool post turret. Write for catalog.

CROZIER MACHINE TOOL CO. Dept. NED 7
Hawthorne, California

▲ For more details circle **NED-6242** on enclosed inquiry slip ▲

Need brushes? Speer's a specialist in just that field, making over 100 different grades for all applications. To make certain you get maximum efficiency, *every step* ... extruding, molding, baking, finishing, application testing ... is precisely controlled in Speer's own plants.

Write today for our free booklet
"Speer Carbon Products"

A Speer application-tested brush for every use:
motors • rotary converters
generators • power tools
subways • ignition systems
starters • power plants
Diesel locomotives
windshield wipers
accounting machines
household appliances

SPEER Carbon Co.
St. Marys, Pennsylvania
Jeffers Electronics Div. Speer Resistor Div.
International Graphite & Electrode Div.

▲ For more details circle **NED-6243** on enclosed inquiry slip ▲

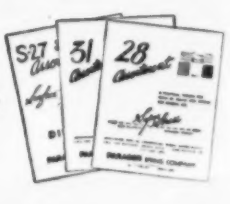
Springs FOR YOUR ORDNANCE CONTRACTS

- Paragon has complete files on Government specifications.
- Experience in the manufacture of close tolerance, high quality springs.
- Complete heat treating and testing facilities.

Your ordnance springs come to you ready for assembly . . . inspected with test affidavits included with each shipment.

SEND SPECS. FOR QUOTATION

Write for STOCK SPRING DATA SHEETS giving complete specs, loading and design information.



PARAGON SPRING COMPANY
4619 West Fulton St., Chicago 44, Ill.

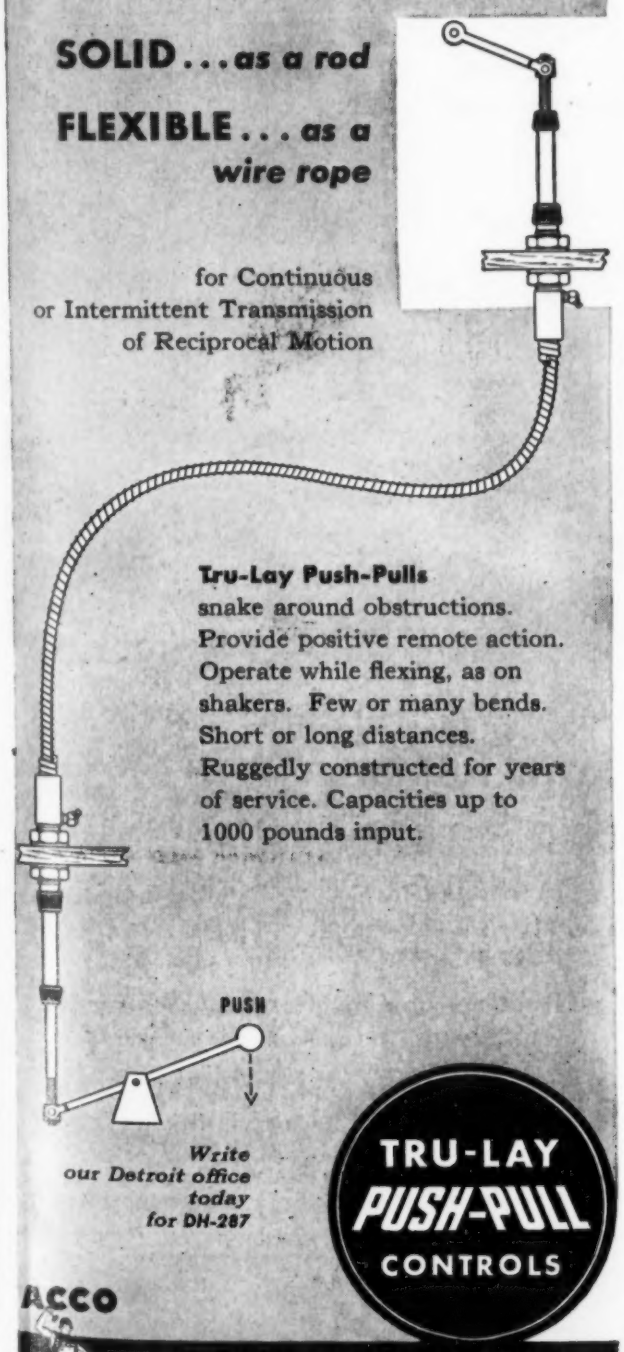
For more details circle NED-6244 on enclosed inquiry slip

an ACCO product

TRU-LAY PUSH-PULL CONTROLS

SOLID . . . as a rod
FLEXIBLE . . . as a wire rope

for Continuous or Intermittent Transmission of Reciprocal Motion



Tru-Lay Push-Pulls snake around obstructions. Provide positive remote action. Operate while flexing, as on shakers. Few or many bends. Short or long distances. Ruggedly constructed for years of service. Capacities up to 1000 pounds input.

Write our Detroit office today for DH-287

TRU-LAY PUSH-PULL CONTROLS

ACCO
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE
601 Stephenson Bldg., Detroit 2
2475 Porter St., Los Angeles 21 • Bridgeport, Conn.

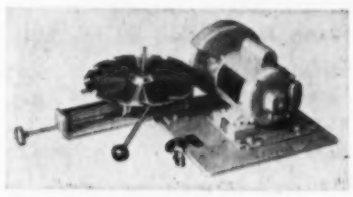
For more details circle NED-6245 on enclosed inquiry slip

POWER STRAP DISPENSER
handles ¾, 1¼ and 2-in. wide strap

Ribbon-wound strap in ¾, 1¼ and 2-in. widths is handled by this compact 847-lb power steel strapping dispenser which has pushbutton controlled feeding rate of 6 to 10 ft per seconds. Cutting operation requires only 2 to 4 seconds. Machine cannot start until safety door on coil holder is shut. It has Stearns magnetic disk brake and Dodge speed reducer. Cutter blades of high carbon, high chrome steel are reversible. Made by **Signode Steel Strapping Co.**, 2632 N. Western Ave., Chicago 47, Ill.

For more details circle NED-6246 on enclosed inquiry slip

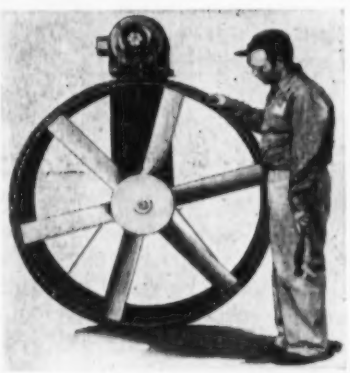
CIRCULAR SAW SHARPENER
for saws with wide tooth spacing



Accurate generation of correct tool shape with uniform, sharp, clean saw teeth is carried out by this cam-actuated circular saw sharpener for saws with wide tooth spacing (safety type). It handles saw blades with 6 to 24 in. diameters and uses a ½-hp capacitor motor. Feed finger is spring actuated and adjustment for saw hook is provided from 0 to 30 degrees. Saw bushings from ¼ to 2 in. are included. Made by **Hanchett Mfg. Co.**, Dept. 101, Big Rapids, Mich.

For more details circle NED-6247 on enclosed inquiry slip

EXHAUST FANS
exhaust up to 40,000 cfm



Applicable for removal of hazardous fumes and vapors and for general ventilation, model M-48 heavy duty exhaust fan unit is available in range from 27,300 to 40,000 cfm. Belt driven unit has welded mounting ring for ease of installation. Fan blades are nonsparking, non-corrosive aluminum alloy. Motor is mounted on an adjustable base located outside the exhaust duct area to permit use of standard ball bearing type motor. Fan pulley and belt are enclosed in a vaporproof housing. Made by **M & E Mfg. Co.**, 2577 Winthrop Ave., Indianapolis 5, Ind.

For more details circle NED-6248 on enclosed inquiry slip

men machines equipment

. . . In time of war plan for PEACETIME PRODUCTION

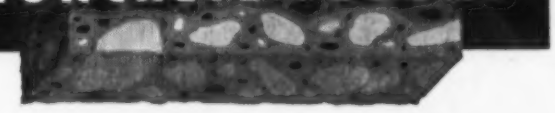
We are ready to discuss tooling for your post-war production. Write for our facilities list.

SEMCO
SERVICE MACHINE COMPANY
INCORPORATED
202 Miller Street Elizabeth, N. J.

For more details circle NED-6249 on enclosed inquiry slip

NOW! A NEW CONCEPT IN CONCRETE FLOORS . . YEARS AHEAD

DYNAPAKT CONCRETE FLOORS



The Dynapakt system is years ahead providing the best concrete floors that can be obtained. Used for topping new or old floor bases, Dynapakt is concrete at its modern best. Users benefit from the high strength floors that have never been achieved before!

GET THE COMPLETE FACTS. WRITE FOR THE NEW ILLUSTRATED BROCHURE . . . "TRAFFIC CONCRETE, A STUDY IN SPECIALIZATION".

FLASH-STONE COMPANY, Inc.
3723 PULASKI AVENUE PHILADELPHIA 40, PENNA
specialists in industrial floor installations . . . nationally

For more details circle NED-6250 on enclosed inquiry slip

Raw Stock or Complete Fabricated Assemblies . . .

General Plate has the Facilities to meet all your Electrical Contact Requirements

There are many advantages for using General Plate composite contact materials and completely fabricated assemblies. Among the more important are better performance, longer operating life and lower fabricating costs.

Raw stock is supplied in various combinations, in overlay, single or double inlay, single or double edgelay, and Top-Lay stock. The precious metal is clad to your required base metals such as brass, bronze, nickel, monel, copper, beryllium copper, etc. In addition General Plate provides composite buttons, rivets, stampings, welded or brazed assemblies.

General Plate fabricated assemblies, including assemblies requiring stampings, screw machine or headed parts with contacts attached, etc., are made to your exact specifications.

Make General Plate your headquarters for solid or composite contacts, contact material and fabricated contact assemblies as well as other composite metals.

GENERAL PLATE
Division of Metals & Controls Corporation
87 FOREST STREET, ATTLEBORO, MASSACHUSETTS

For more details circle NED-6251 on enclosed inquiry slip

PRECISION KEYWAYS with an ADJUSTABLE GLENNY PUSH BROACH

Production or short-run keyway cutting can be accomplished in all types of bushings, sleeves, gears, etc., with the GLENNY adjustable push broach. Featuring 0.0005-inch accuracy, it can be instantly adjusted and micrometer checked for precision operations.

SPECIFY GLENNY . . . greater strength . . . maximum accuracy . . . fully adjustable for depth . . . interchangeable high-speed blades . . . bushing adapters available . . . will cut tapered keyways . . . hardened tool-steel external parts . . .

GLENNY broach sets are available for cutting keyways in bores ranging in diameter from ¼ to 2½ inches.

181 KM

KASE MACHINE COMPANY
18534 East 201st St.
Cleveland, Ohio

KASE MACHINE COMPANY
Please send (without obligation) your new Bulletin No. 13 containing sizes, specifications and prices of GLENNY broaches and kits.
NAME _____
COMPANY _____ TITLE _____
STREET _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-6252 on enclosed inquiry slip

- To Electronic Length Sorter
- Single File
- In Oriented Position
- Automatically

SYNTRON "Vibra-Flow"

PARTS FEEDERS

Let controlled vibration feed your small, medium or large parts . . . single file . . . in oriented position . . . at variable rates . . . without damage . . . to your inspection and counting devices and other automatic processing equipment.

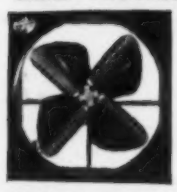
Catalog data upon request. Or send details of your problem along with sample parts to . . .

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-6253 on enclosed inquiry slip

EMERSON ELECTRIC EXHAUST FANS

for COMPLETE ventilation of commercial, industrial and institutional buildings



Belt-Drive Exhaust Fans with 24- to 48-inch blades

Direct-Drive Exhaust Fans with 12- to 30-inch blades

In this complete line of exhaust fans, you'll find the right model for the majority of air-moving jobs . . . *right* blade size . . . *right* capacity . . . *right* mounting for installation at any angle.

And ALL Emerson-Electric Exhaust Fans provide quiet, trouble-free performance season after season. Each unit is backed by 62 years of precision design and manufacturing experience.

For further information write today for Bulletin No. T73.

THE EMERSON ELECTRIC MANUFACTURING CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

For more details circle NED-6254 on enclosed inquiry slip

IMMEDIATE SHIPMENT

STYLE 600 STACKING BOX

ALL PRICES F.O.B. FACTORY PHILADELPHIA

COMPLETE CATALOG ON REQUEST

An ideal all-purpose shop box with rigid handle and hook hole each end. Sturdy all-welded construction. Heavy skids act as positive stacking lock and reinforce box at point of maximum wear. Will stack with style 500 stacking bin of same length and width.

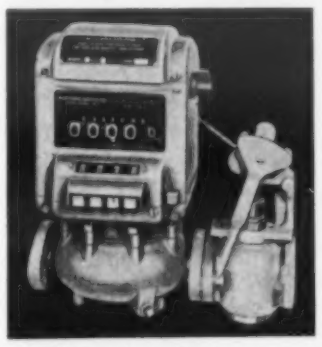
Product Number	Width	Length	Height	Gauge Steel	Price Plain	Price Green
601-18	10"	16"	6"	18	$1.55	$1.71
602-16	12"	18"	8"	16	$2.29	$2.58
603-18	12"	18"	6"	18	$1.84	$2.05
603-16	12"	18"	6"	16	$2.11	$2.35

PHONE • WIRE • WRITE
BAldwin 9-1805

BAY PRODUCTS INC.
3009 N. 16th St. • Phila. 32, Pa.

For more details circle NED-6255 on enclosed inquiry slip

BATCHING METER automatically controls liquid feeds



Accurate and automatic control of quantity of industrial liquids fed into processes or batching operations is possible with Auto-Stop meter consisting of model 432 register mounted on type S disk meter. Meter automatically shuts off the quick-closing valve when it has delivered a preselected number of gallons or pounds. Large numerals on the meter keep pace with the flow and a totalizer keeps cumulative totals. Flow can be stopped at any time by emergency button. Auto-Stop meter is available in 1, 1½ and 2-in. sizes with capacities from 5 to 100 gpm. Model 431 register without Auto-Stop feature is available in 1, 1½, 2 and 3-in. sizes for flow rates from 5 to 300 gpm. Cold and hot water, syrups, oils and other liquids can be handled. Made by **Neptune Meter Co.**, 50 W. 50th St., New York 20, N. Y.

For more details circle NED-6256 on enclosed inquiry slip

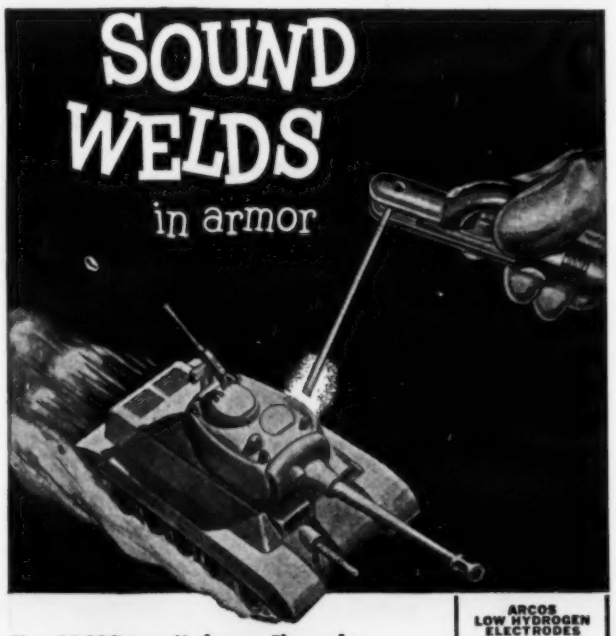
PRECISION 12-in. LATHE two improved models are offered with 24, 36 and 48-in. between centers

Retaining the Clausing name, two heavy duty 12-in. precision lathes have been redesigned. Series 6300, illustrated, features a forged ground steel spindle with 1-in. collet capacity and ASA L-00 tapered key drive nose. Timken tapered roller bearing spindle and lead screw, outboard drive with dual A-belts, choice of countershaft or variable speed drive, wide bed with two V-ways and two flat ways precision ground, and splash lubricated enclosed headstock, gear box and apron are standard.

Also Timken tapered roller bearing equipped is series 4800 lathe which has threaded spindle and ½-in. collet capacity. Automatic apron is double-walled, with gears and shafts splash lubricated. Built-in countershaft has friction clutch and brake. Quick-change gear shafts turn on ball bearings, and motor mount is integral. The two V-ways and two flat ways are precision ground.

Both machines have 12¾-in. swing over bed and 7½ in. over saddle. Thread range is 48—4 to 224 standard, right or left. Made by **Atlas Press Co.**, Clausing Div., 2323 N. Pitcher St., Kalamazoo, Mich.

For more details circle NED-6257 on enclosed inquiry slip



Use ARCOS Low Hydrogen Electrodes

There's nothing experimental about welding high tensile steels with Arcos Low Hydrogen Electrodes. They've all been tested by time and service on armor welding as well as commercial applications.

ARCOS LOW HYDROGEN ELECTRODES
Tensilend 70
Tensilend 120
Nickend 2
Chromend 1M
Tensilend 100
Manganend 1M
Manganend 2M
Chromend 2M

ARCOS CORPORATION
1500 South 50th St. Phila. 43, Pa.

WELD WITH ARCOS
Stainless, Low Hydrogen and Non-Ferrous Electrodes

For more details circle NED-6258 on enclosed inquiry slip

Now's THE TIME TO GET READY For WINTER!

Make your plant a comfortable, productive place to work next winter—install "Buffalo" Unit Heaters now! They throw quick heat where you want it. Quality built, with efficient "Buffalo" Fans and Aerofin coils. WRITE FOR BULLETINS 3137-D and 3704—solve next winter's heating problem now and be sure!

Takes no floor space! "Buffalo" Suspended Lowboy Heating and Ventilating Unit

"Buffalo" UNIT HEATERS

Compact BREEZO-FIN Unit Heater

For Large Areas! "Buffalo" Highboy Unit

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, N.Y.
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

For more details circle NED-6259 on enclosed inquiry slip

WHY SKILLED WORKMEN Prefer RIDGID

Small Ratchet Threaders

Drop head sets to thread ⅛" to 2"

Extra Fast Easy Pipe Threading

RIDGID Bolt Dies OOR-B ¼" to 1", National Coarse and Fine Thread

★ Heads snap into ratchet ring from either side, won't fall out.

★ Precision-cut alloy dies reverse for close-to-wall threads—no special dies needed.

★ 00R & 0R, ⅛" to 1"; 111R and 11R, ⅛" to 1¼"; 12R, ⅛" to 2". Conduit dies available.

★ Buy at your Supply House.

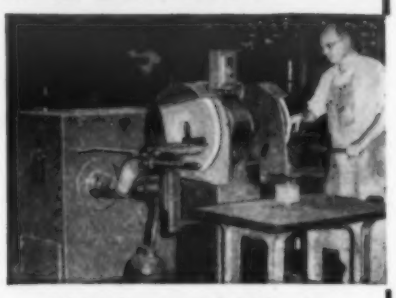
THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID Work-Saver Pipe Tools

For more details circle NED-6260 on enclosed inquiry slip

STOP DUST

Instantly with DUSTKOP



DUSTKOP ▶ 1400 cfm

▼ DUSTKOP 3600 cfm

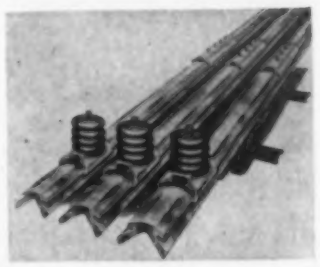
300 cfm to 10,000 cfm per unit (22 models).

Standard, pre-tested, available from stock. Ask for catalog 605-2. Describe dust problem for recommendation by return mail. No obligation.

AGET-DETROIT CO.
201 Main St.
Ann Arbor, Mich.

▲ For more details circle NED-6261 on enclosed inquiry slip ▲

THIRD RAIL SYSTEM
makes use of aluminum conductor for mobile track-mounted equipment



Conservative design capacity of 1000 amp is offered in Keystone aluminum third rail system which weighs considerably less than other systems. It precludes use of improvised structural shapes to feed power moving equipment such as cranes, ore bridges and materials handling equipment. Absence of arcing permits safe high voltage operation. Integration of design of collector, conductor and accessory components accomplishes maximum efficiency of current transfer.

Features include absence of corrosion, maintenance of conductor alignment, allowance for differential expansion and freedom from icing on contact surfaces. System is desirable on long alternating current installations because of its noninductive nature. Aluminum can be spaced on close centers to achieve low reactance drops. Made by **Electric Service Mfg. Co.**, 1735 Cambria St., Philadephia 32, Pa.

▲ For more details circle NED-6264 on enclosed inquiry slip ▲

THE ONLY AIR CYLINDER WITH ALL CONTROLS *Built-In*

THIS revolutionary air cylinder is a complete power unit in itself. Four-way directional valve, with an operating lever adjustable to work from any angle in any plane, and separate speed controls for advance and retract strokes, are integral with the cylinder itself. This compact "controlled-air-power" unit requires only one air connection which can be flexible hose. Available in 1¼", 1¾", 2½", 3⅝" and 4½" bores. Any stroke length.

Known as the Bellows Air Motor, this modern version of air cylinder power makes air safer, easier and simpler to use. Helps in a hundred ways to get more production at lower cost.

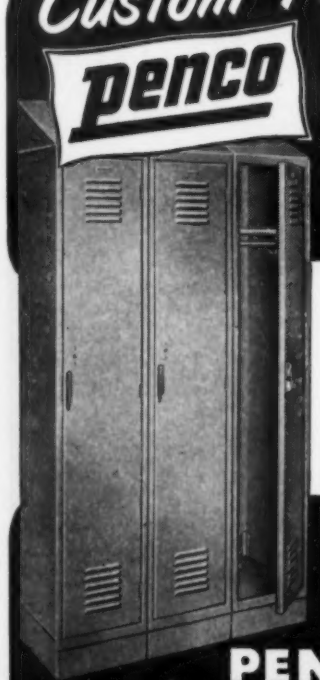
• *Write today for your free copy of the new 30-page bulletin "Faster, Safer, Better Production". Address The Bellows Co., Dept. NED 752 222 W. Market St., Akron 9, Ohio.*

1199

The Bellows Co.
Akron 9, Ohio

▲ For more details circle NED-6267 on enclosed inquiry slip ▲

"Custom" Features IN ECONOMICAL STANDARD STEEL LOCKERS



penco

Penco gives you a *choice* of 337 combinations of *standard* locker types, sizes and design variations—permitting maximum flexibility in locker room planning! Have your own "custom-type" installation at *standard* cost! Locker catalog No. L-100 shows how. Send for it *now!*

Penco Single Tier Lockers with slope tops and closed bases—boost employee morale, promote locker room cleanliness!

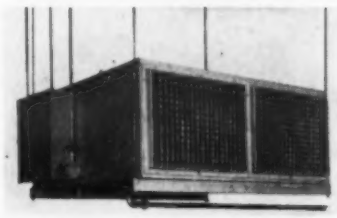
PENN METAL
Corporation of Penna.

Founded 1869 by I. Lewis Sagendorph

82 OREGON AVENUE, PHILADELPHIA 48, PA.

▲ For more details circle NED-6262 on enclosed inquiry slip ▲

HUMIDFYING UNIT
with air delivery of 4000 cfm can also serve as spot cooler



Primary application of type BA-2 self-contained humidifier is in industrial spaces where hygroscopic materials are stored or processed. Unit can also act as spot cooler around furnaces in industrial plants and will supply a controlled flow of cool air through evaporative cooling. In its primary function, unit atomizes city water and mixes resulting mist with air. It then filters air and removes water droplets, delivering the resultant moist air to room in a controlled pattern.

Evaporative capacity is up to 10 gal water per hour when recirculating room air, and up to 18 gal per hour with heated air supply. Air delivery is 4,000 cfm. Evaporators are powered by two ¾-hp totally enclosed motors. Parts subject to water damage are of noncorrosive metals.

Wide blade grilles can be adjusted to assure proper distribution of air throughout area to be served. Evaporation is controlled by automatic humidistat, and all controls are accessible for servicing. Filter-eliminators are backwashed periodically by means of hose attached to unit. Unit is designed for suspension mounting. Made by **Bahnson Co.**, 1001 S. Marshall St., Winston-Salem 8, N. C.

▲ For more details circle NED-6265 on enclosed inquiry slip ▲

New OHMITE POWR-RIB RESISTORS

Here is a new resistor which provides *dependable* operation for high-current applications.

Ohmite Powr-Rib edge-wound type resistors are wound with a heavy ribbon of resistance alloy on a ceramic core. This ribbon is rated at 375°C (707°F) temperature rise. All other metal parts are specially plated to prevent oxidation at high operating temperatures, and to insure good electrical contact. The ceramic core is divided into five sections to provide flexibility and resistance to shock. Available in full-rated capacities from 18.0 to 108 amperes; in resistance values from 0.100 to 2.85 ohms.

Write for BULLETIN No. 141
OHMITE MANUFACTURING CO.
4841 Flournoy St.
Chicago 44, Ill.

Be Right with **OHMITE®**

RHEOSTATS • RESISTORS • TAP SWITCHES

▲ For more details circle NED-6268 on enclosed inquiry slip ▲

HERMASEAL GLASS TUBES HELP SPEED UP ASSEMBLY

WHY—Hermaseal Glass Tubes have metallized ends, for easy soldering to end caps—saves time, cuts down on rejects.

STOCK SIZES
—Hermaseal makes Glass Tubes in a variety of stock sizes, and can also make up special units to meet your requirements.

HERMASEAL
—is a specialist in Sealed Terminals, Headers and allied parts.

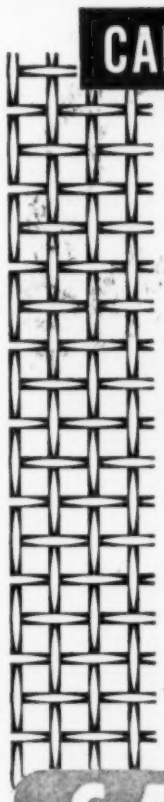
COMPLETE CATALOG
—Just off the press, a new catalog with descriptions and specifications for most of Hermaseal's stock Terminals and Headers. Write for copy today.

Hermaseal

THE HERMASEAL CO., Inc.
Elkhart 20, Indiana

▲ For more details circle NED-6263 on enclosed inquiry slip ▲

CAL-WIC WIRE CLOTH



THE RIGHT WEAVE

• • • for every industrial requirement including screening, filtering, grading, cleaning and numerous other types of processing.

THE RIGHT WEIGHT

• • • precision-fabricated for long-lasting dependability and economy.

THE RIGHT METAL

• • • for highest resistance to chemical action, moisture, corrosion, abrasion and extremes of temperature.

For additional information write or phone our nearest sales office.

THE COLORADO FUEL & IRON CORPORATION – Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION – Oakland, California
WICKWIRE SPENCER STEEL DIVISION – Clinton, Massachusetts

CAL-WIC CFI
INDUSTRIAL SCREENS
THE COLORADO FUEL AND IRON CORPORATION

▲ For more details circle NED-6266 on enclosed inquiry slip ▲

FOR *Strictly* IMPERSONAL INSPECTION CHOOSE AMES DIAL COMPARATORS

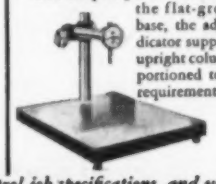
Ames Dial Comparators make the inspection of duplicate parts an extremely simple, rapid and accurate operation. Ames Comparators are strictly impersonal in their accuracy – the results being in no way dependent on the skill or judgment of the operator. The pressure of the gauging members against the work is mechanically determined and therefore uniform.

Check the Ames Dial Comparators shown – one of them may solve a Quality Control problem for you.

Ames No. 1 is an easily adjustable bench model dial comparator that measures objects up to 2" in cross section. This comparator is designated *Ames No. 1W* when equipped with a dead-weight and contact to ASTM specifications for measuring resilient materials.

Ames No. 2 is a compact bench model dial comparator for measuring sheet metal, glass, hard rubber. *Ames No. 2W* is similar, but is furnished with dead-weights and contacts to ASTM specifications for checking textiles, plastics, sheet rubber, etc.

Ames No. 13 features flat-ground, cast-iron base of ample size for using V-blocks and locating fixtures. The No. 13 can be fitted with a fine adjustment for close setting. Adjustable bracket holds any Ames Indicator.



Ames No. 130 is designed especially for inspecting comparatively large and odd-shaped parts. For this reason, the flat-ground steel base, the adjustable indicator support, and the upright column are proportioned to the user's requirements.

Send us your Quality Control job specifications, and we will supply complete details and proposal without obligation.

Representatives in principal cities. **B. C. AMES CO.** 54 Ames Street Waltham 54, Mass.

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle NED-6269 on enclosed inquiry slip ▲

BETTER POWER TRANSMISSION

Whenever you require a reduction in speed between any prime mover and a driven machine, there is a Foote Bros. drive exactly suited to your needs.

The Foote Bros. line includes horizontal and vertical drives in either helical gear or worm gear types. Also available are Foote Bros.-Louis Allis Gearmotors in single, double and triple reductions. Call your Foote Bros. representative or write for information.

SEND FOR BULLETINS

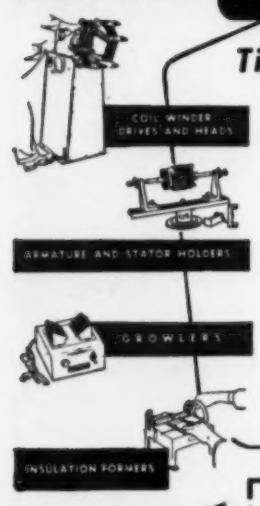
HGA { Horizontal Worm Drives / Vertical Worm Drives / Hytop Worm Drives }
LPB Line-O-Power Straight Line Drives
MPB Maxi-Power Helical Drives
GMA Foote Bros.-Louis Allis Gearmotors

FOOTE BROS. GEAR AND MACHINE CORPORATION
Dept. NE, 4545 S. Western Boulevard
Chicago 9, Illinois

FOOTE BROS.
Better Power Transmission Through Better Gears

▲ For more details circle NED-6270 on enclosed inquiry slip ▲

CROWN MOTOR REPAIR SHOP EQUIPMENT



Time-Savers to Cut Costs On Motor Repair Jobs

Shorten the time it takes to put a motor through the repair shop and you reduce costs or increase your profits. CROWN Motor Repair Shop Equipment is designed by practical electrical men to increase shop volume and quality without increasing payroll. Every item in the CROWN Line has proved in shop practice to pay for itself many times over. Economical in first cost.

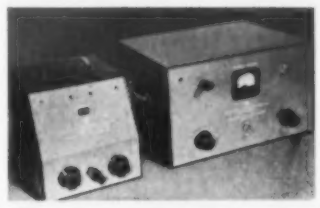
GET THIS FREE CATALOG TODAY!

Mail the Coupon

CROWN INDUSTRIAL PRODUCTS CO.
406 Borden Ave., Sycamore, Illinois
Please send me your new catalog of motor repair shop equipment.
NAME_____
COMPANY_____
ADDRESS_____
CITY_____ZONE____STATE_____

▲ For more details circle NED-6271 on enclosed inquiry slip ▲

MAGNETIC FIELD METER
uses nuclear resonance principle and can be used with oscilloscope



Using the principle of nuclear resonance, model 101 Magnetometer accurately measures magnetic field strength. Oscillator coil surrounds sample and provides oscillatory magnetic field which allows measurement of proton resonance and nuclear resonance of lithium. Coil's level of oscillation drops with increase in circuit losses as may be introduced by nuclear resonance in sample.

Range is from 300 to 25,000 gauss, covered by proton and lithium resonances. This field strength range is covered by frequency spectrum of 1.18 to 34 Mc. Width of modulation sweep can be varied from 1.6 to 16 gauss. Equipment measures only magnetic fields whose homogeneity is at least 1 part in 500 for proton resonance and 1 part in 5000 for lithium resonance over dimensions of sample to be detected. Made by **Laboratory for Electronics, Inc.,** 77 Pitts St., Boston 14, Mass.

▲ For more details circle NED-6272 on enclosed inquiry slip ▲

TITRATION METER
control of redesigned instrument has provision for polarized system

Incorporated in redesigned Titrimeter are hood to protect connections from 'hand capacity' effects, magnetic stirrers and fixed electrodes (in place of stirring electrodes) and counterclockwise-rotating motor mounted on a swivel head. When burette is properly positioned, an electronic eye blinks to warn operator of the approach of an end-point. Stirring speed can be set at any point from a gentle swirl to brisk agitation. A switch interrupts the stirring action when the stirrer is swung outward, then restarts it at same speed when new sample is positioned.

Means for amplifying electrical potentials and detecting these changes are combined in control unit. Provision for polarized electrode systems used in Karl Fischer moisture determinations is incorporated. A calibrated dial and two simple controls are only manipulative parts. Scale is graduated in pH units and volts. Accessories include micro-titration kit and Karl Fischer apparatus. Made by **Fisher Scientific Co.,** 715 Forbes St., Pittsburgh 19, Pa.

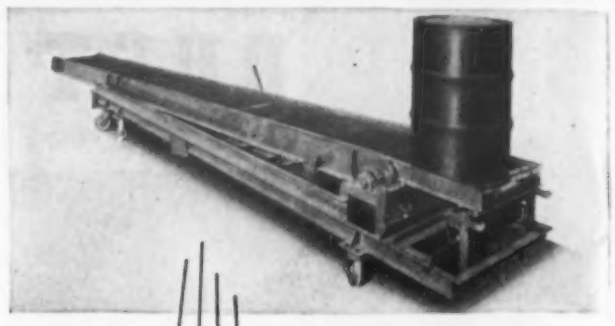
▲ For more details circle NED-6273 on enclosed inquiry slip ▲

STURTEVANT DUSTLESS BLENDERS
Thoroughly Blend Substances into an Inseparable Mass

The 4-Way Mixing Action of the Sturtevant Dustless Blenders thoroughly mixes two or more substances into an inseparable whole . . . every part of which is the same analysis. Single receiving and discharging opening insures tight sealing during mixing process. "Open-door" accessibility permits thorough cleaning. The fast, accurate mixing operation increases output . . . cuts mixing costs. Mixing capacities from ¼ ton to 75 tons per hour. Write.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

▲ For more details circle NED-6274 on enclosed inquiry slip ▲



Much of the hard work and risk of accidental injury has been taken out of the job of unloading drums from freight cars.

With the New Alvey portable unloading device, you can unload drums from both box cars and gondola cars. Unloads box cars with the boom lowered – Boom is quickly and easily raised by an hydraulic lift for unloading gondola cars.

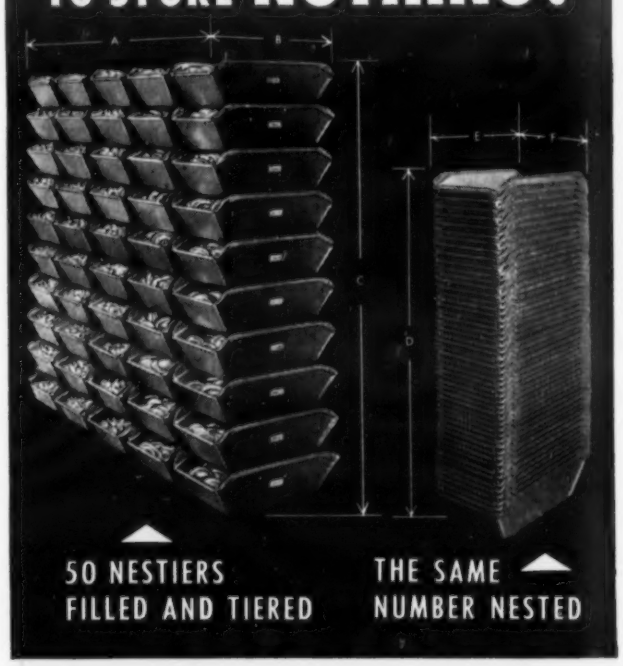
You can get more information by writing...

ALVEY CONVEYOR MFG. CO.
9259 Olive St. Rd. • St. Louis 24, Missouri
BRANCH OFFICES IN PRINCIPAL CITIES

ALVEY *St. Louis*

▲ For more details circle NED-6275 on enclosed inquiry slip ▲

WHAT DOES IT COST YOU TO STORE NOTHING?



Stop and think—your present materials handling boxes take up just as much precious floor space empty as they do filled. But not Nestiers. The new modern Nestiers *nest* to save space!

Check the space requirements in the illustration above and then compare them with the space you now devote to the same number of filled and empty boxes. For a comparison of larger quantities, 500 No. 175 Nestiers, nested in stacks of 50, take up 13.1 sq. ft. of floor space—1,000 Nestiers in stacks of the same size use only 26.2 sq. ft. of space! Figure the big amount of space you can save with Nestiers—and remember, it's a lot cheaper to conserve the space you have than to expand it.

Nestier	A	B	C	D	E	F
#220	67½"	22¾"	67¼"	51½"	22¾"	13½"
#175	51¼"	18¼"	56½"	55"	18¼"	10¼"

Write for this brochure describing the Nestier and the Nestier System. You'll see that the space saving feature is just one of many advantages of this revolutionary materials handling box.

NESTIER
IT NESTS - IT TIERS

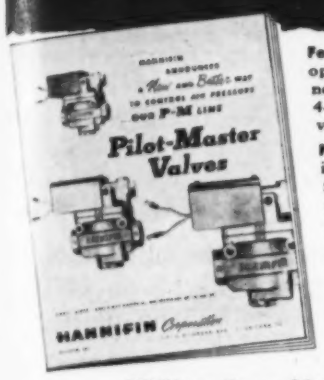
THE CHAS. WM. DOEPKE MFG. CO., Inc.
Metal Specialties Division Rossmoyne, Ohio

▲ For more details circle NED-6276 on enclosed inquiry slip ▲

MAINTENANCE MEN!

GET THE FULL STORY ON HANNIFIN'S

NEW Pilot-Master Air Control Valves!



Fewer Valves to Stock. Same valve operates either 2-way or 3-way, normally open or normally closed. 4-way valves also available. Pilot valves for remote control.

Fewer Parts to Stock. Every moving part of main or "master" valve fits in an easily removable cartridge. NO SPRINGS! Two sizes of cartridge fit all 5 valve sizes. Pilot heads (solenoid or pressure operated) fit any size valve.

Solenoids Easily Serviced. The specially designed solenoids can be disassembled to replace the coil, or to install a coil of another voltage.

All Sizes From ¼" to 1¼" I.P.S.
Pressures From 15 to 150 P.S.I.
Write for Bulletin 231 and get the complete story!

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave. • Chicago 24, Ill.

For more details circle NED-6277 on enclosed inquiry slip

WANTED: ENGINEERS

We're looking for engineers whose prime responsibility is to seek ways and means to make products or parts better, more efficient and at lower cost. To you, we recommend Taylor Laminated Plastics.

If your company makes its own parts, consider Taylor Vulcanized Fibre and Taylor Phenol, Melamine and Silicone Laminates, available in sheets, tubes, rods, strips and coils. If you are looking for a dependable source of supply for parts fabricated to your own specifications, Taylor's Fabricating Service is equipped to turn out precision-made parts having the physical, electrical and mechanical characteristics you require. Write today for literature. Address inquiries to Dept. ND7.

SINCE 1901 Taylor LAMINATED PLASTICS

TAYLOR FIBRE CO.

NORRISTOWN, PA. • LA VERNE, CALIF.

Offices in Principal Cities

VULCANIZED FIBRE • TAYLOR INSULATION
PHENOL, SILICONE & MELAMINE LAMINATES
FABRICATED PARTS

For more details circle NED-6278 on enclosed inquiry slip

SPRACO NOZZLES

Write for NOZZLE CATALOG to

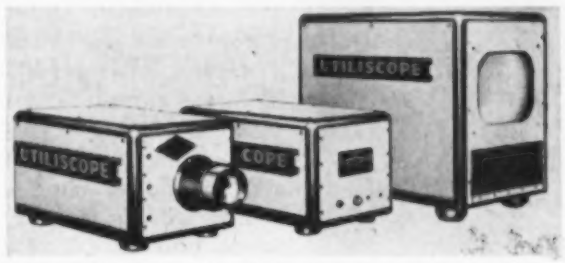
SPRAY ENGINEERING CO.

106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-6279 on enclosed inquiry slip

INDUSTRIAL TELEVISION three units weigh only 133 lb

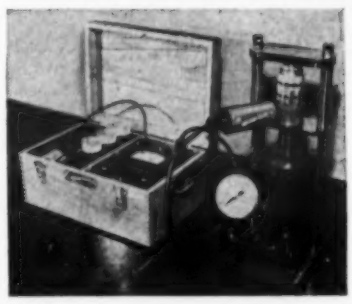
Model 300-B Utiliscope wired industrial television installation consists of camera, small power unit and monitor or viewing unit, weighing a total of 133 lb.



Lenses with 30 and 15-degree viewing angles and another lens with motorized focusing from 10 in. to infinity are available. Equipment will operate at ambient temperatures as high as 150° F continuously. The monitor can be seen clearly through a viewing angle of almost 150 degrees. Operation can be on any 105 to 120-v, 60-cycle circuit. Only a screwdriver is needed to adjust focus, brilliance and contrast. All tubes except camera pickup are standard and easily available. Made by **Diamond Power Specialty Corp.**, Lancaster, O.

For more details circle NED-6280 on enclosed inquiry slip

MOISTURE TESTING INSTRUMENT for nonmetallic granular or powdered materials

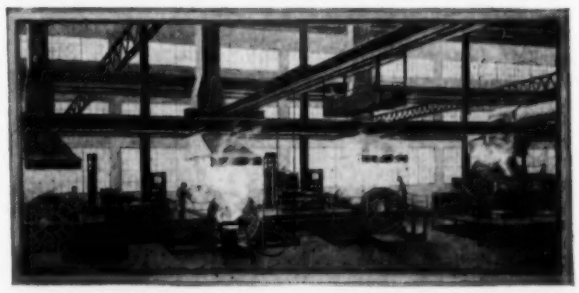


Virtually any type of nonmetallic granular or powdered material can be tested for moisture content in about 1 minute by model G5 electronic moisture testing instrument. A master measuring unit; the interchangeable range box; the sampling unit, consisting of electrode and sample cup; and the hydraulic press with pressure gage comprise the instrument. Samples, which need not be weighed and measured for testing, are placed in cup, then compressed by 5-ton hydraulic press to predetermined pressure as read on built-in gage. Plug-in range box is then inserted at base of measuring cup and sample's moisture content is indicated on microammeter.

Instrument employs 'suppressed zero' technique which spreads critical moisture range over entire face of microammeter dial to give more divisions for each per cent of moisture content. It can be supplied with battery power or voltage regulated line supply. When used with latter, only 10 w of current are consumed. Complete instrument occupies bench space 11 in. deep and 24 in. long. Extreme height is 18 in. Made by **Moisture Register Co.**, Dept. NED, 1510 W. Chestnut St., Alhambra, Calif.

For more details circle NED-6281 on enclosed inquiry slip

AJAX Induction Melting Furnaces A New Tool For Industry



This oil painting shows AJAX-SCOMET installation at Scovill Manufacturing Co., Waterbury, Conn.

Here is a new tool for melting metal . . . Something that can concentrate enormous power in a small space . . . Something that can be adapted to accurate pouring, to precise temperature control, to inert gas protection, to high grade refractories . . . A tool that can be used for all existing non-ferrous metals and alloys.

AJAX furnaces paved the way for continuous casting processes which lay dormant in old patents of far-sighted inventors who thought ahead of their times. *Write us for further information.*

AJAX TAMA-WYATT

AJAX ENGINEERING CORP., TRENTON 7, N. J.

INDUCTION MELTING FURNACE

AJAX ELECTRO METALLURGICAL CORP., and Associated Companies
AJAX ELECTROTHERMIC CORP.
AJAX ELECTRIC CO., INC.
AJAX ELECTRIC FURNACE CORP.

For more details circle NED-6282 on enclosed inquiry slip

NOW ONE MAN CAN DRILL "GREEN CONCRETE" OR GRANITE!

It's EASY, using a power hammer equipped with carbide-tipped Thunder-Core or Thunder-twist

Drills holes 1-1/8" to 6" diameter. Deep spiral flutes, one for each cutting tip, remove dust speedily and surely. Removable Thunder-Center makes it easy to precisely locate and start holes. Extra-length shanks and special tapers available on request. THUNDER-CORE does the cutting—the hammer does the work.

Drills holes 3/16" to 1-1/4" diameter, up to 24" deep. Spiral vanes, plus straight flutes, with no carbide hang-over at tip. Eliminates dust-packing and binding of bit in "GREEN CONCRETE" DRILLING and increases drilling rate in VERY HARD CONCRETE or GRANITE. THUNDER-TWIST does the cutting, the hammer does the work.

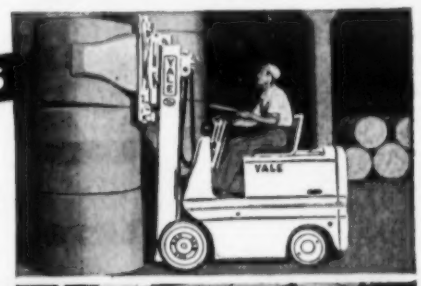
By the makers of Cyclo-Core and Cyclo-Twist. *Send for new Masonry Drill Bit Guide—Helps you choose the RIGHT bit for EACH job!*

New England Carbide TOOL CO., INC.
60 BROOKLINE STREET, CAMBRIDGE 39, MASS.

For more details circle NED-6283 on enclosed inquiry slip

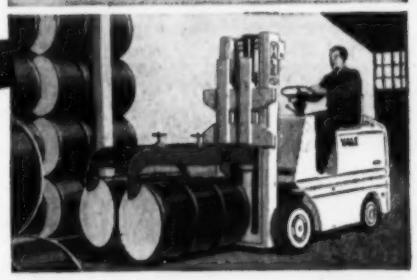
Isn't it time YOUR business enjoyed these savings, too?

SAVINGS to the paper industry—Moving bulky paper rolls



SAVINGS to stevedore operations—With fast, high, safe lifting

SAVINGS to the chemical industry—Safely handling drums and carboys



Exclusive YALE Gas Truck Features Cut Materials Handling Costs . . . and Maintenance Costs, too

• Time lost in bringing YALE Gas Truck Savings to your business is *money* lost. For YALE Gas Trucks can cut up to 75% off your materials handling costs...save even more in reduced maintenance costs and production stoppages.

Find out now how YALE Gas Trucks' exclusive features reduce your bills for breakdown and wear in clutch, drive, steering assembly—every working part of the truck. Call your YALE Representative—or mail the coupon below.

YALE

MATERIALS HANDLING EQUIPMENT

YALE is a registered trade mark of The Yale & Towne Mfg. Co.

MAIL THIS COUPON TODAY

The Yale & Towne Mfg. Co., Dept. 377
Roosevelt Blvd. & Haldeman Ave., Phila. 15, Pa.
How can YALE Industrial Gas Trucks do more—save more—for me?
☐ Please have your local representative call
☐ Please send free detailed literature

Company_____
Name_____ Title_____
Street_____ City_____ State_____
In Canada write: The Yale & Towne Manufacturing Co., St. Catharines, Ont.

YALE ELECTRIC INDUSTRIAL TRUCKS • YALE WORKSAVERS • YALE HAND TRUCKS
YALE HAND AND ELECTRIC HOISTS • YALE PUL-LIFTS

For more details circle NED-6284 on enclosed inquiry slip

Wherever it's HOT specify Sicon

NEW IMPROVED SILICONE-BASE HEAT-RESISTANT FINISH

Protects Stewart Warner's New Saf-Aire Wall Furnace

Quality finish specifications for this heating unit called for a coating that would stand 500° and still retain its color and gloss—a temperature far above that incurred in normal operation. Ordinary heat resistant coatings failed. SICON *Ivory* and SICON *Beige* worked perfectly...just as SICON has solved so many other finish problems. *Write for dynamic proof of SICON'S amazing stability under heat! New Brochure now ready.*

Manufactured exclusively by

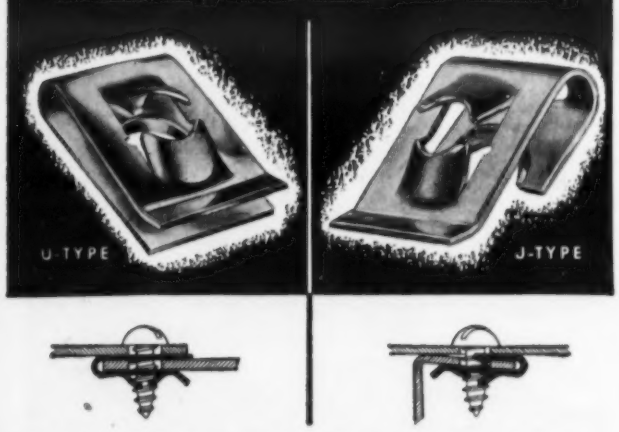
MIDLAND Industrial Finishes

Waukegan, Ill.

ENAMELS · SYNTHETICS · LACQUERS · VARNISHES

For more details circle **NED-6285** on enclosed inquiry slip

Speed Nuts® ...proved cost-savers on assembly lines throughout industry



"U" and "J" Type SPEED NUTS are self-retaining; hold a constant hole alignment, and will not vibrate loose. They are made of highest quality spring steel in a wide variety of standard and special sizes. "U" and "J" Types are only two of thousands developed by Tinnerman Engineers to cut fastening costs. Ask your Tinnerman Representative, or write us direct for a FREE "Fastening Analysis."

TINNERMAN PRODUCTS, INC.

Dept. 12, Box 6688, Cleveland 1, Ohio

For more details circle **NED-6286** on enclosed inquiry slip

TEFLON IMPREGNATED ASBESTOS PACKING

The Advantages of Teflon

PLUS

Greater Resiliency

Moderate Cost

Chemically inert, heat-resistant, anti-hesive Teflon has solved many packing problems. But under certain conditions, Teflon's cold-flow characteristic causes trouble. The solution to cold-flow is Flexrock #401 braided white asbestos packing impregnated *throughout* with Teflon.

#401 offers solid Teflon's advantages *plus* superior resiliency, permitting a tight, lasting seal at low gland pressure, against *acids, alkalis and solvents.* #401 is versatile, eliminates the need for costly, machined Teflon rings. Stock it for applications demanding absolute *non-corrosion, non-contamination.* Won't "seize" a shaft or spindle; serviceable from −100°F. to 500°F. In continuous lengths, square section, from ⅛" to 1" by 1/16" increments.

We furnish a complete line of *Teflon Packing:* solid or impregnated in endless ring or continuous braided construction; *Teflon Gaskets:* solid or jacketed; *Teflon Stock:* sheets, tape, cylinders, rods, tubing, bars. *Also, special shapes.*

Mechanical Packing Division

FLEXROCK COMPANY

PHILADELPHIA 4, PA.

Mechanical Packing Division
FLEXROCK COMPANY
3603 Filbert Street, Phila. 4, Pa.

☐ Send more information on #401 Packing
☐ Send information on these other Teflon products_____

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State_____

Please clip coupon to Company letterhead

For more details circle **NED-6287** on enclosed inquiry slip

VARIABLE SPEED MOTOR CONTROL uses selenium rectifiers for instant starting and reversing

Designed for light production work, ¾-hp type 1702-A Variac motor speed control provides adjustable-speed operation of direct current motors from alternating current power lines, plus instant starting and reversing together with strong dynamic braking. Typical application is on lathes where several operations are done on same piece at different optimum speeds; or for operations such as blind tapping where gradual starting and stopping is desired. Compound-wound motor not only starts fast, but will not overheat under repeated starts, stops or reversals.

Other features include use of selenium rectifiers, easy installation and maintenance, quick starting of heavy loads, a choke to reduce alternating current ripple in armature circuit and armature voltage source with low internal impedance. Made by **General Radio Co.,** Massachusetts Ave. & Front St., Cambridge 39, Mass.

For more details circle **NED-6288** on enclosed inquiry slip

SURFACE GRINDER processes parts of various metals without using holding fixtures

Accurate generation of flat surfaces on cast iron, steel, stainless and tool steel, aluminum and zinc die cast and bronze parts is possible with PDQ surface grinder. It is also adaptable to grinding of plastics, ceramic parts, glass and other materials requiring rapid stock removal and flat surfaces. Machine uses 12-in. cylinder type grinding wheel which rotates in horizontal plane and is recessed within grinding table work surface.

Parts up to 9½ in. wide and of any reasonable length or height can be processed. No holding fixtures or magnetic chucks are required. Front section of table can be removed to accommodate parts having side obstructions that cannot ordinarily be ground on such a machine. Main drive is from a 2-hp motor. Included are dust removal and coolant systems. Made by **PDQ Grinder Co.,** 8 Manhasset Ave., Port Washington, N. Y.

For more details circle **NED-6289** on enclosed inquiry slip

Slash Repair and Maintenance Costs with the CIRCO HEAVY DUTY STEAM CLEANER

The answer to your tough plant housekeeping, production and parts cleaning jobs is the CIRCO Steam Cleaner. DIRT, grease, grime—NOTHING—can resist the powerful blast of wet or dry steam. Into the steam is injected a cleaning compound which aids in the rapid removal of grease, dirt, paint, etc.

Cleans faster than other methods. Reduces fire hazards. Cuts repair and maintenance time. Quiet operation. The CIRCO Steam Cleaner costs little to operate—Fully automatic. No special skill required. Portable and stationary models.

Manufactured by

WRITE FOR Bulletin 521

TOPPER EQUIPMENT COMPANY

24-36 MAIN STREET • MATAWAN, NEW JERSEY

Offices in principal cities 1772

PER-SOLV (Perchlorethylene) • CIRCO-SOLV (Trichlorethylene)

"CIRCO" VAPOR DEGREASERS • METAL PARTS WASHERS • DRYERS

SOLVENT RECOVERY STILLS • STEAM CLEANERS

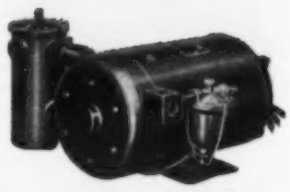
For more details circle **NED-6290** on enclosed inquiry slip

HERE YOU HAVE **VACUUM** IN THE MOST COMPACT UNIT!

Requires scarcely more space than its own motor!

MOTOAIR* PUMP

Motor and pump in one integral unit makes it ideal for compactly incorporating in existing machine designs.



NO BELTS
NO EXTENDED DRIVE

Operates equally well whether ceiling, wall or normally mounted. Visible lubrication; built-in exhaust air-filter; no "discharge oil". Motoair is a rotary type, with floating blades compensating for their own wear.

819

Ask for Catalog . . .

NEW JERSEY MACHINE CORPORATION

1530 Willow Ave. • Hoboken, N. J.

Factory offices in Chicago, Cincinnati, Los Angeles

For more details circle **NED-6291** on enclosed inquiry slip

ECONOMICAL SHEET HANDLING

LOUDEN OVERHEAD HANDLING OF SHEET STEEL PAYS FOR ITSELF QUICKLY, AND YIELDS TREMENDOUS SAVINGS IN MAN-HOURS . . .

To meet the mill practice of shipping sheet steel in five-ton bundles, it is almost mandatory that fabricators likewise use overhead handling equipment. Otherwise expensive man-handling and inefficient transportation inside the plant are inescapable. Further, steel prices are higher when sheets are shipped in less than five-ton bundles.

Louden Monorail equipment permits bundles to be hoisted intact from railroad cars and moved to storage or the start of a fabricating process anywhere inside the plant. Then, the same equipment may be used for intermediate handling steps in the fabricating process.

WRITE FOR THIS FREE BOOK

Case histories telling how Louden Monorail Systems have saved time and money for widely different kinds of industries are described and pictured in a new, illustrated, 56-page book called, "Economical Material Handling".

THE LOUDEN MACHINERY COMPANY

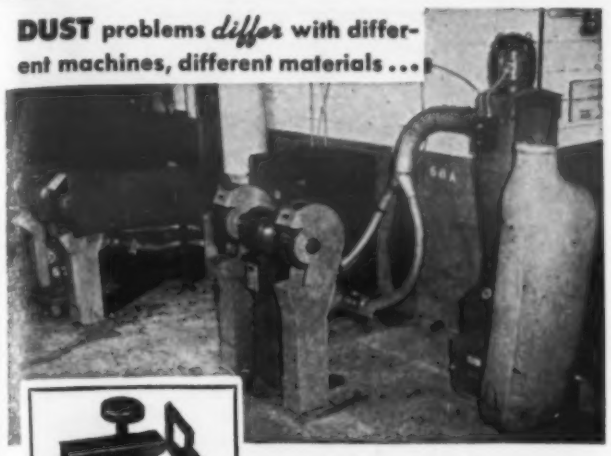
5126 S. Superior Ave., Fairfield, Iowa

Louden

OVERHEAD MATERIAL HANDLING

For more details circle **NED-6292** on enclosed inquiry slip

DUST problems *differ* with different machines, different materials . . .



Torit Door Fastener
The sturdy and efficient door fastener used on Torit cabinets is available for use on your own products. Strike plate either flat or angular. Write for prices.

ALL CAN BE SOLVED WITH CABINET OR CYCLONE TYPE

TORIT

DUST COLLECTORS

Here adjoining machines present differing dust collecting problems. At the left is a belt grinder with its metal and abrasive particles. Its dusts are eliminated by a cabinet type Torit Dust Collector.

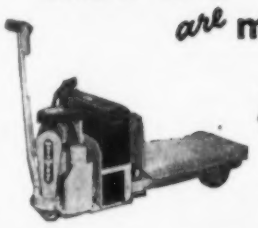
At the right a cyclone type Torit Dust Collector efficiently handles the lint and dusts from a double-end, 12" x 5" wheel, polishing stand.

Torit manufactures cyclone and cabinet type dust collectors in many models, so that the best for your particular problem can be put to work for you. Write today for complete information and latest Torit catalog.

TORIT MANUFACTURING CO. 298 WALNUT STREET ST. PAUL 2, MINN.

For more details circle NED-6293 on enclosed inquiry slip

"MOTO-TRUCS *are* more dependable *and give* longer service greater value" *say* MOTO-TRUC USERS



Their shorter turning radius and rugged power enable them to do jobs no other "Walkie" can do.

● Since 1936, when Moto-Truc brought the first motorized hand truck, they have proven their superiority for all operations in the "Walkie Field."

● From zero cold to desert heat, they work with steady efficiency day after day. Ease of operation (all controls in handle), and a minimum of repair and replacement expense make them the favorite of both Labor and Management.

A "twist of the wrist" does it.

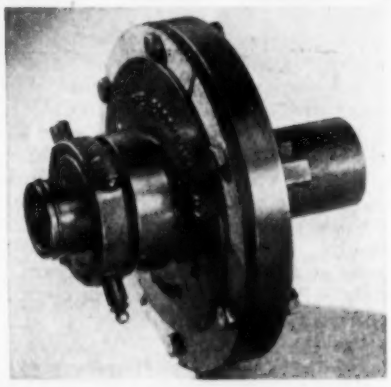
SEND FOR Bul. No. 51

DON'T BE SATISFIED WITH LESS THAN THE BEST.

THE MOTO-TRUC CO.
1953 E. 59th ST., CLEVELAND 3, OHIO
PALLET, PLATFORM AND HI-LIFT TRUCKS

For more details circle NED-6294 on enclosed inquiry slip

EDGEMONT "K-E" DISC CLUTCH

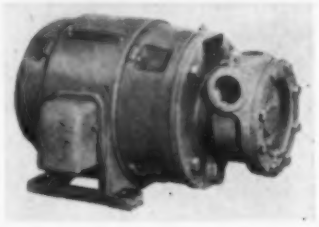


—for stub or through shaft mounting on gasoline engines, electric motors, speed reducers, et cetera. Extended sleeve model illustrated, also available in cut-off coupling model. Both types available for shaft sizes up to 1¼". Bolted in split friction disc feature enables disc replacement without dismounting clutch or riveting. Clutches operate with light pressure—no grab. Rated at .8 HP at 100 rpm. they are self-locking when engaged, and have positive threaded steel adjustment. Write for Bulletin K-2.

THE EDGEMONT MACHINE CO.
2200 HOME AVENUE • DAYTON 1, OHIO

For more details circle NED-6295 on enclosed inquiry slip

SELF-PRIMING PUMPS
available in two mounting types for hot and cold vaporous liquids



Line of self-priming standard design turbine vane type pumps is designed to handle hot and cold, clear and vaporous liquids, in moderate capacities, against medium or high heads. Type TVE units are for close-coupling to face-mount electric motors, while type TVB units are flexible-coupled electric drive pumps. Self-priming device is optional in both types.

Hot water up to 250° F can be handled. Pumps are able to handle liquids where a constant capacity is required, but where head conditions vary. Capacity range at 3500 rpm is up to 58 gpm; at 1750 rpm, up to 56 gpm. Head range at 3500 rpm is up to 800 ft; at 1750 rpm, up to 300 ft. Motor sizes up to 20 hp are available at 3450 rpm and up to 7½ hp at 1750 rpm. Made by **Food Machinery & Chemical Corp.**, Peerless Pump Div., 301 West Ave. 26, Los Angeles 31, Calif.

For more details circle NED-6296 on enclosed inquiry slip

JIG BORER
small machine has measuring system for close tolerance table settings

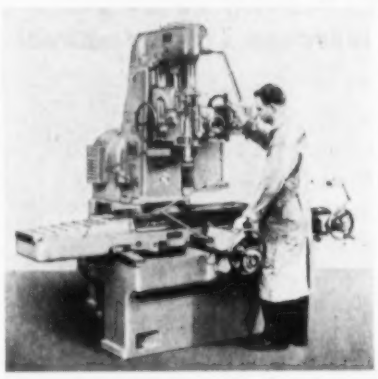
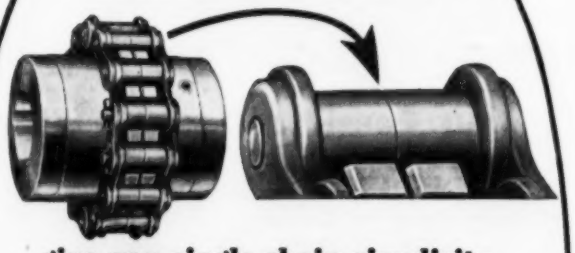


Table settings accurate to 0.0002-in. are made quickly on No. 1E jig borer which is equipped with the Electrolimit measuring system. Two measuring units, independent of traversing screws, control longitudinal and transverse settings. Machine, capable of precision locating, drilling and high speed boring in small work, has heavier and wider bed than previous model, telescoping table and carriage way guards and quill mounted on preloaded ball bearings.

Sixteen spindle speeds range from 65 to 2800 rpm, and four spindle feeds, both up and down, range from 0.0006 to 0.006-in. per revolution. The 12 x 24-in. table has 18-in. longitudinal travel and 12-in. traverse travel, while the 12 x 42-in. table has 36-in. longitudinal travel. Special columns 4 or 6 in. higher than standard are available to increase the normal 20-in. capacity between table and spindle. Made by **Niles-Bement-Pond Co.**, Pratt & Whitney Div., 20 Charter Oak Blvd., West Hartford 1, Conn.

For more details circle NED-6297 on enclosed inquiry slip

Only LINK-BELT "RC" FLEXIBLE COUPLINGS . . .



give you single-chain simplicity, plus divided rollers

It's Link-Belt's exclusive design that makes the difference! No other Roller Chain Coupling offers the simplicity of single-width chain combined with these operating advantages: Equalize load, maintain proper balance at high speeds, adjust to reasonable misalignment and end float. Link-Belt's complete line of "RC" Roller Chain Couplings covers all sizes from fractional to 1000 hp. You can get all the facts from Folder 2363.

"RC" Couplings available in 30 sizes, ⅜ to 12 in. bore.

LINK-BELT COMPANY 12,798

Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa), Sydney (Australia). Offices, Factory Branch Stores and Distributors in Principal Cities.

LINK-BELT "RC" FLEXIBLE COUPLINGS

For more details circle NED-6298 on enclosed inquiry slip

LET'S GET IT STRAIGHT!

The "DIMENSIONAIR" Air Gage —

IS calibrated accurately over its entire range
IS set accurately with only one master
HAS a range of .003" with 2500 to 1 magnification
HAS much longer plug wear
HAS greater plug clearance so that the same plug can be used on both rough and finished dimension
REMAINS stable for long periods of time

Yes, let's get it straight, the Dimensionair does away with the limitations common to previous types of air gages.

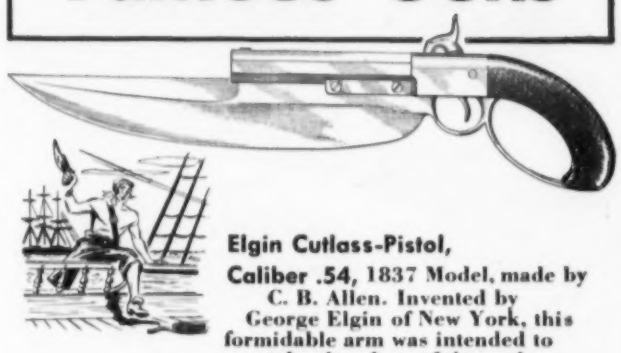
Federal Dimensionair Proves Itself

Find out what the Federal Dimensionair will do for you! Discover how the exceptional measuring range of .003" lets you gage irregular shaped and tapered holes. Oil or coolants won't affect the Dimensionair: grit and dirt won't clog it: rough handling won't harm it. Write for complete information. FEDERAL PRODUCTS CORPORATION. 1177 Eddy Street, Providence 1, Rhode Island.

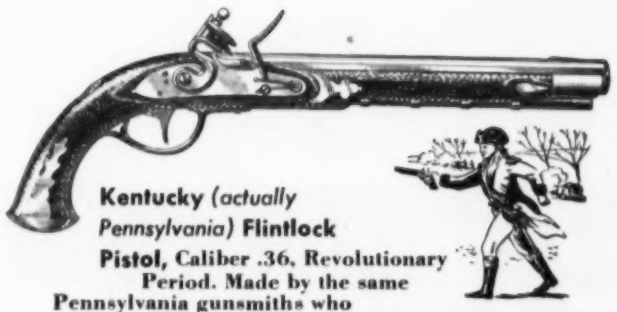
FEDERAL
Largest manufacturer of indicating type gages . . . exclusively.

For more details circle NED-6299 on enclosed inquiry slip

Famous Guns



Elgin Cutlass-Pistol, Caliber .54, 1837 Model, made by C. B. Allen. Invented by George Elgin of New York, this formidable arm was intended to take the place of the cutlass and pistol commonly used by naval boarding parties. One of several variations of this weapon is the shorter Bowie-Knife Pistol.



Kentucky *(actually Pennsylvania)* **Flintlock Pistol,** Caliber .36, Revolutionary Period. Made by the same Pennsylvania gunsmiths who crafted the famous "Kentucky" rifles, these full-stocked pistols actually were rifles-in-miniature. Every "Kentucky" pistol is unique; the same gunsmith never made two alike.

Instant-heating Weller Soldering Gun for light or heavy work. Dual heat greatly increases tip life. Switch instantly to high or low heat as job requires. Pre-focused spotlights end "blind soldering". Exclusive tip-fastening arrangement assures full, constant heat. Shatter-proof plastic housing. Perfect balance. Low-cost, replaceable tips. Pays for itself in a few months. See at your Distributor or write for Bulletin direct.

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Weller BETTER FROM GRIP TO TIP!

SOLDERING GUNS 809 Packer Street, Easton, Pa.

The Finest Soldering Tool for the Finest Craftsmen

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Controlled Volume Pumps

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This new 16 page illustrated bulletin is your guide to better precision pumping! Bulletin No. 351 describes Milton Roy precision-engineered Air-Powered Controlled Volume Pumps—built to meter practically any liquid in volumes as low as 0.12 cc per full stroke to 450 gallons per hour, against pressures up to 25,000 psi. Graphic schematics of pump air controls; air consumption and capacity-pressure tables; process-proved automatic chemical feed systems—these are some of the dramatic elements of this book. For your free copy of Bulletin No. 351, write today.

MILTON ROY COMPANY
1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

For more details circle NED-6301 on enclosed inquiry slip

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YES! AND PRE-LUBRICATED!

Idler bearings on TRANSALL Sectional Conveyor Systems are *factory-lubricated* with special lubricant inhibited against oxidation and emulsification. Lubrication lasts entire life of bearing, which is *factory-sealed leak-proof*. Result: Low friction factor, smaller diameter rolls, less horsepower needed, belt-life increased, maintenance costs reduced, no grease contamination of product. To "get a load off your mind" write TRANSALL, INC., 120 N. 11th Street, Birmingham, Alabama.

TRANSALL SECTIONAL BELT CONVEYOR SYSTEMS

For more details circle NED-6302 on enclosed inquiry slip

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Gentlemen:
We want to know, without obligation, all about Revolvator Go-Getter Pallet Type Liftrucks.
Name.....
Position.....
Company.....
Address.....

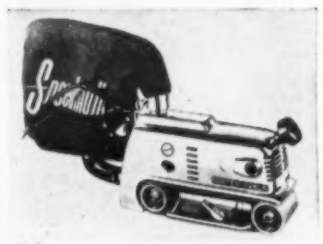
For more details circle NED-6303 on enclosed inquiry slip

STATIONARY DIE HEAD
self-opening unit has locking action

Threading range from No. 4 to 5/8-in. diameter is designed into the 5HH Landmatic stationary self-opening die head for use on turret lathe, hand screw and automatic screw machines employing a stationary type head. It has small number of working parts, all made of hardened and ground alloy steel. The size adjustment mechanism has a positive locking action and provision for movement of 0.001-in. on pitch diameter of the work piece. Opening action is by interrupting forward travel of turret slide or carriage or by hand, and closing is by hand. Chaser holders operate in dovetail slots in the head body. Left-hand threads can be cut by using left-hand chaser holders which, along with chasers are interchangeable with 5H Landmatic head. Made by **Landis Machine Co.**, 40 E. Fifth St., Waynesboro, Pa.

For more details circle NED-6304 on enclosed inquiry slip

PORTABLE DUSTLESS SANDER
vacuum system picks up 85 per cent of dust to increase stock removal

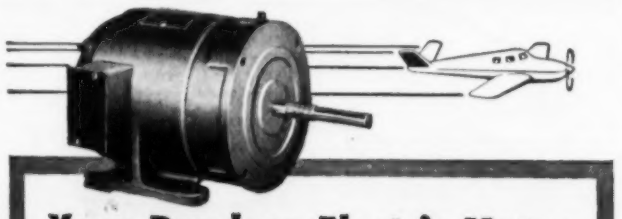


Capable of doing work of heavier machines and designed for rough sanding or finishing operations, 15-lb model 503 portable electric dustless sander, can be used on wood, metal, plastic and glass. Vacuum system picks up over 85 per cent of the sanding dust, and low-slung large-capacity dust bag can be moved to right or left of rear handle for operator's convenience. Heavy-duty 115-v ac-dc motor drives 3 x 24-in. belt at speed of 1120 sfpm for a cool, even sanding job.

Tension device facilitates belt changing, and tracking control quickly centers belt on pulleys with simple knob adjustment. In addition to improved jack-shaft design, sander has transparent oil level window to show when gear lubricant supply drops below recommended level.

Standard equipment includes resilient cork pad and steel shoe cover, 10-ft cord, front and rear handles, three assorted abrasive belts, dust collecting bag and nozzle and two tubes of special grease. Made by **Porter-Cable Machine Co.**, Dept. PR-6, 1710 N. Salina St., Syracuse 8, N. Y.

For more details circle NED-6305 on enclosed inquiry slip



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Single Phase • Polyphase • Direct Current • ¼ to 15 H.P.

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Sheet and Roll Felt Manufactured for Special Purposes and To Meet All S.A.E. and Military Specifications.

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Branches in all Principal Cities
MANUFACTURERS AND CUTTERS OF WOOL FELTS

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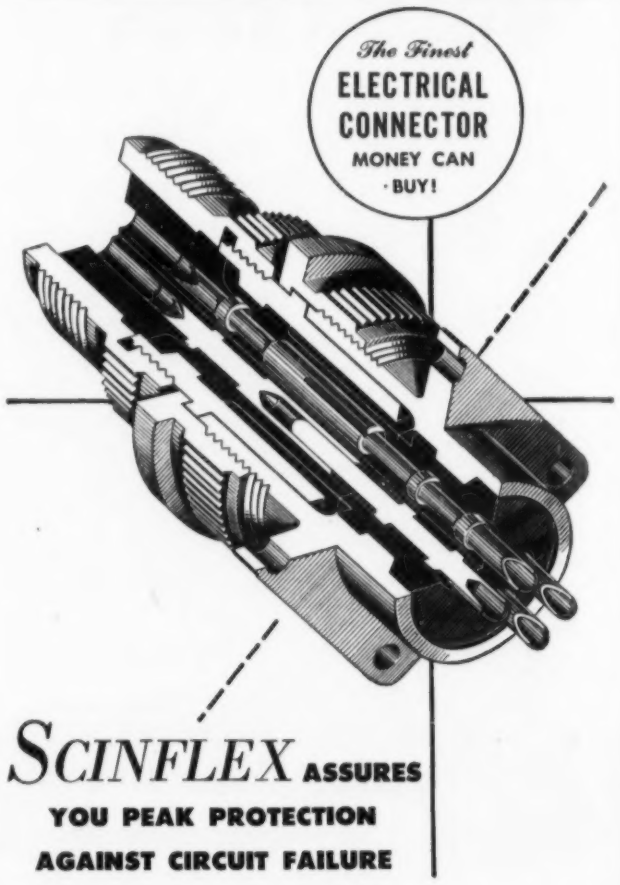

SCINFLEX **ASSURES YOU PEAK PROTECTION AGAINST CIRCUIT FAILURE**

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

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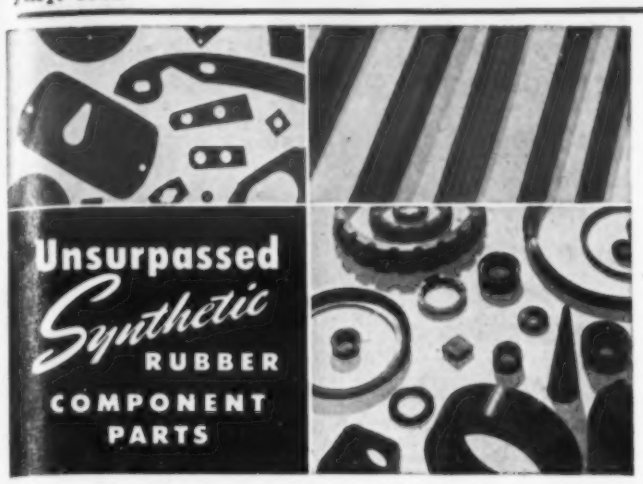
For more details circle NED-6308 on enclosed inquiry slip



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- non-porous for easy cleaning
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AKRON 9, OHIO • PROCESS EQUIPMENT DIVISION
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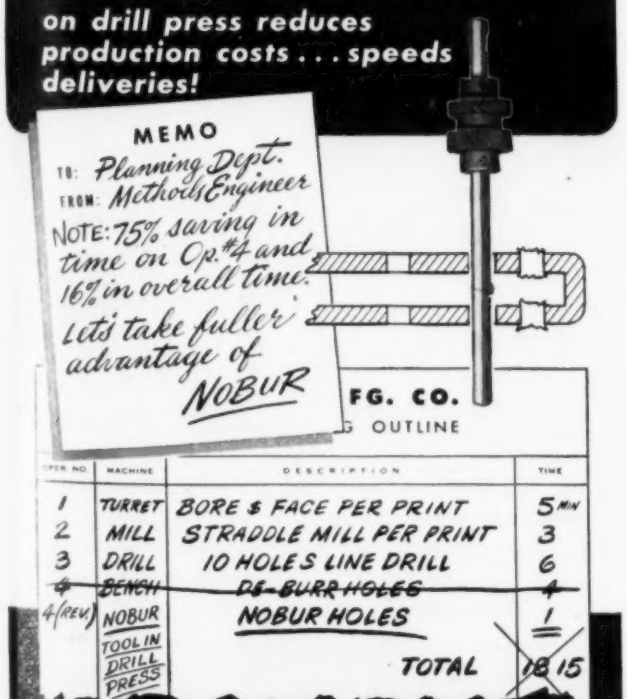
Deburring with NOBUR tool
on drill press reduces production costs . . . speeds deliveries!



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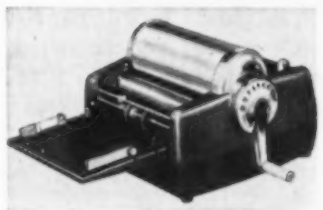
NOBUR MANUFACTURING COMPANY
717 NORTH VICTORY BLVD. • BURBANK, CALIFORNIA
For more details circle NED-6311 on enclosed inquiry slip

ARC WELDED DIAPHRAGMS
made of extremely thin metal

Arc welded diaphragms in thicknesses of from 0.0015 to 0.005-in. are being made of stainless steel, Ni-Span C and phosphorous bronze for use in pressure transducers, pressure elements and seals for many applications. Specially developed equipment makes possible welding of these extremely thin diaphragms. Made by **Bristol Co.**, 30 Bristol Rd., Waterbury 20, Conn.

For more details circle NED-6312 on enclosed inquiry slip

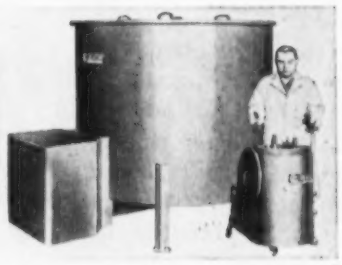
SPIRIT DUPLICATOR
makes 125 copies per minute



Automatic feeding device on model A-44 liquid process rotary duplicator assures up to 125 dry, face-up copies per minute of any typed, printed, written or drawn original. Copies are made in one operation and in one to five colors in sizes from 2 x 2 in. to 9 x 14 in. Adjustable paper guides which position paper squarely with feeding rollers prevent crooked sheets, paper wrinkling, under runs and wasted materials. Other features are Magic Fluid Flow, simple right hand turn operation, finger flip pressure control for light or dark copies and choice of Sahara Topaz or Sapphire Gray finishes. Made by **Duplicopy Co.**, Dept. N-2, 224 W. Illinois St., Chicago 10, Ill.

For more details circle NED-6313 on enclosed inquiry slip

PARTS DEGREASERS
capacities range from 5 to 330 gal



Whirlpool-like agitation of cold cleaning solvents loosens and removes dirt, oil, grease and chips from parts placed in heavy gage steel Wirl Agitor cleaning units. Parts are placed inside tank in a basket or heavy steel rack. Electric motor drives V-belt and large-vaned impeller for turbulent action, and grease-sealed dual ball bearings keep the impeller correctly aligned. Only impeller and seal are mounted in tank, while bearings are located below tank bottom, sealed off from solvent. Eight models, from portable units with casters up to stationary types for handling engine blocks, are available. They range in capacity from 5 to 330 gal. Pump unit is optional. Made by **Graymills Corp.**, 3717 Lincoln Ave., Chicago 13, Ill.

For more details circle NED-6314 on enclosed inquiry slip

ONE

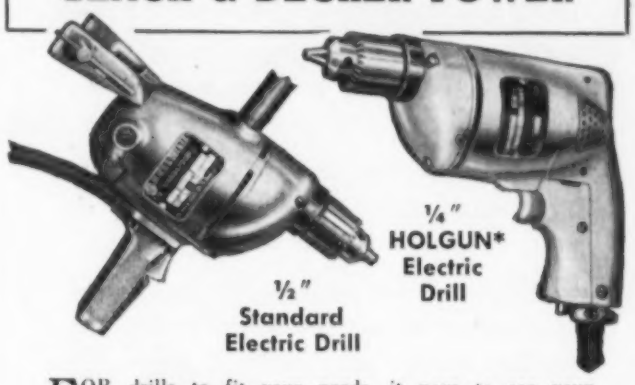
is A COMPLETE power shop

A De Walt is a complete power shop in *one* machine. It saws at any angle, it dadoes, routs, shapes, tenons, grinds, sands, drills, and even does light metal cutting. For one small investment, in money and in floor space, you get the equivalent of a warehouse full of cutting equipment. Write for catalogue to De Walt Inc., Dept. G-7, Lancaster, Pa.

DE WALT
POWER SAWS
DE WALT INC., Lancaster, Penna.
Subsidiary of American Machine & Foundry Co., New York

For more details circle NED-6315 on enclosed inquiry slip

DRILLING PROBLEM?
Switch to
BLACK & DECKER POWER



FOR drills to fit your needs, it pays to see your nearby Black & Decker Distributor *first*! You get an unmatched choice of Drill models—capacities from 1/4" to 1 1/4"—choice of handle arrangement—choice of speed, power and price in most capacities. And you get powerful Black & Decker-built motors, full ball-bearing construction, extra-tough parts, husky housings, perfect balance. Write for free catalog to: THE BLACK & DECKER MFG. Co., 662 Pennsylvania Ave., Towson 4, Md.

*Trade Mark Reg. U.S. Pat. Off.

LEADING DISTRIBUTORS EVERYWHERE SELL
Black & Decker
PORTABLE ELECTRIC TOOLS
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is YOUR cleaning equipment equal to the JOB?

Take a look at your own cleaning program! Are you trying to do a 1952 cleaning job with 1908 model equipment?

Modern, cost-reducing cleaning methods call for modern equipment. And, that's where Tornado cleaning is proving itself in thousands of plants, institutions and commercial buildings.

The powerful, rugged Tornado sucks air in excess of 300 m.p.h.—picks up scrubbing solutions and liquids just as easily as dirt and metal chips.

You'll find Tornado always equal to your cleaning work whether it be regular wet or dry floor cleaning, overhead work in hard to reach spots, cleaning lint from electric motors and equipment or blowing dirt and debris from aisles and under stationary seats and equipment. Write for bulletin 600.

From liquids to metal chips, Tornado pickup gets them all!

The removable blower cleans machinery and motors.

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YOU CAN'T MATCH IT ANYWHERE!

Like a finger print, there is no matching a Viking Rotary Pump. There are a lot of pumps that look like Viking but none are built like Viking.

Insist on the genuine "gear-within-a-gear" Viking . . . the time-proved, dependable, quality-built pump that out-performs all substitutes.

Building for over 40 years the now most copied of all rotary pumps, assures you of receiving the pump that can't be matched anywhere.

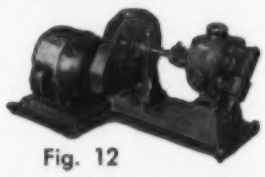

Fig. 12

For additional information, ask for bulletin 525G today.

VIKING AN HONORED NAME IN PUMPING

Viking PUMP COMPANY Cedar Falls, Iowa

See Our Catalog in SWEETS

For more details circle NED-6318 on enclosed inquiry slip

TOO HOT TO HANDLE?

Use Spencer Vacuum

There's no production time lost when Spencer Vacuum is used to clean soaking pits, brick kiln flues and remove boiler fly ash. While still hot, tons of debris are removed every day at temperatures up to 500°F.

The car wheel pit above is 30 feet deep. One man, at the top of the pit, empties it in minutes instead of hours. No dust is distributed in the plant.

Plant housekeeping costs nothing when Spencer Vacuum is installed. It increases production—reclaims materials, conveys foods—and in off hours—cleans the plant itself. 132 ways to save described in Bulletin 144.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

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439-8

For more details circle NED-6319 on enclosed inquiry slip

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your material—

for moisture resistance

Need a material that's moisture resistant PLUS? Synthane laminated plastics may fill the bill. In addition to being practically impervious to water, our type of laminated plastics is also a good electrical insulator, hard, tough, dense, dimensionally stable, light in weight, chemical and abrasion resistant, and may be easily machined on standard wood or metal working tools. We have the experience and facilities for fast fabrication of parts. Find out more about Synthane—mail the coupon below today.

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RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

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Please send me the new Synthane Catalog without charge or obligation on my part.

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For more details circle NED-6320 on enclosed inquiry slip

OFFICE FOLDING MACHINE
precision-folds up to 8½ x 14-in. sheets at rate of 5000 per hour

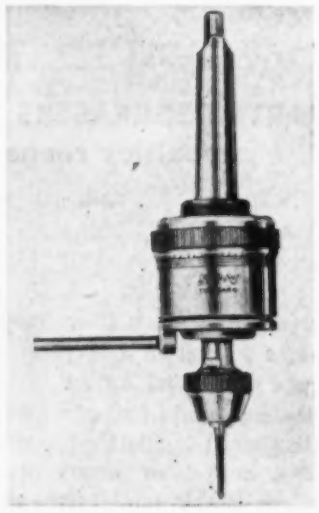
Similar to typewriter in size and price, this model FH office folding machine automatically folds various types and sizes of paper forms and letters. Electrically operated, machine precision-folds up to 5000 sheets per hour. Simple enough to be operated by any office worker, it can be set up for any folding job in about 1 minute, using measuring rule and adjustment of two indicator knobs.

Machine can produce two parallel folds in one operation, and can make any one of eight basic types of folds in variety of paper weights. It will handle duplicating, bond, ledger, book, coated and uncoated papers in sizes ranging from 3 in. square to 8½ x 14 in. Machine is portable and can be stored conveniently when not in use.

Folder feeds and stacks from same end to conserve working space and enables the operator to remain in one position. Sheets are stacked in hopper and are moved lightly by finger to feed rolls where electric machine takes over. Made by **Pitney-Bowes, Inc.,** 1946 Pacific St., Stamford, Conn.

For more details circle NED-6321 on enclosed inquiry slip

TAPPING ATTACHMENT
has adjustable torque drive



Holes can be tapped at a cutting speed of 300 fpm and blind holes can be tapped in light metal at spindle speeds up to 2500 rpm with SVE tapping attachment. Torque, transmitted through a mechanical locking device consisting of steel balls and springs, is not affected by rpm variations, oil or heat. A mechanical reversing clutch is entirely automatic, reversing as soon as the drill spindle starts to back. Pretapped holes cannot be double tapped, as finishing tap rotates at full speed, picking up the thread correctly and automatically as it is fed into the hole. Five models have capacities from No. 0 to No. 5, No. 4 to ¼-in., No. 10 to ½-in., ½ to 1⅛ in. and 1 to 2 in. Made by **Eric S. Johnson Co.,** 232 E. Ohio St., Chicago 11, Ill.

For more details circle NED-6322 on enclosed inquiry slip

CUT YOUR SWEEPING COSTS 75%

Free DEMONSTRATION PROVES IT

with

WILSHIRE POWER SWEEPERS

Costs in general may continue to go up, but here's one you can really cut...the cost of keeping your floors swept. WILSHIRE Power Sweepers not only cut your sweeping costs...they sweep cleaner, without dust. In the average plant, they pay for themselves in 10 to 12 weeks.

Write for the name of your nearest WILSHIRE Dealer who will be glad to give you a Free Demonstration right in your own plant.

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For more details circle NED-6323 on enclosed inquiry slip

A-81

ANOTHER W&T PRECISION INSTRUMENT....

The W&T Precision Mercurial Manometer

The W&T Precision Mercurial Manometer couples maximum precision with ease in handling. These two features have made it a leading instrument in modern research and manufacture for such uses as measuring sample pressures in infrared spectroscopy and calibrating aircraft altimeters. Because of its flexibility and accuracy, the Manometer can be used for almost any type of pressure measuring problem in the range of two atmospheres.

Such characteristics are only part of the picture. Take a look at these additional features:

1. Float type indicator eliminates difficulty in reading meniscus.
2. Adjusting knob provides for temperature compensation over a range of 30° C.
3. Precision bore manometer tube provides accuracy with interchangeability
4. Fixed cistern type manometer requires only one reading.
5. Mercury sealed valve permits evacuating the tube simply and easily at the point of use.
6. Flexible design permits measurement of absolute pressure, gauge pressure, differential pressure, and vacuum.

For more details, write today for free technical bulletin TP-29-A.

WALLACE & TIERNAN PRODUCTS, INC.
ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey • Represented in Principal Cities

For more details circle NED-6324 on enclosed inquiry slip

hot spots in your plant?

specify *REFRASIL*

Play safe! Use REFRASIL to eliminate dangerous "hot spots" in your plant. REFRASIL provides a temperature drop from 1200°F. to 300°F....½" foil blanket withstands sustained exposure to extreme temperatures. REFRASIL is easy to install — easy to remove. So play safe — specify REFRASIL for your high temperature insulation problems.

REFRASIL, light in weight and versatile in use, is available in a variety of physical forms to meet virtually any insulation need—see illustrations at right.

use *REFRASIL* for...

Ducts carrying high temperature liquids. (Refrasil Blankets)

Electric ovens. (Refrasil batt or bulk fibers)

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For more details circle NED-6325 on enclosed inquiry slip

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- Rugged and sturdy yet lightweight.
- Visors available in 4, 6 and 8 inch depths and .020, .040 and .060 thickness.
- 3 Models of headgear — Large spark protector, small spark protector and no spark protector.

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SQUARE D COMPANY

For more details circle NED-6327 on enclosed inquiry slip

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(THE HANDY HAMILTON PORTABLE ELEVATING TABLE)
LIFTS — LOWERS — LEVELS
TRANSPORTS

Eliminates "ganging-up" on heavy lifts. Reduces occurrence of industrial accidents. Eliminates the need for extra hands, extra trips.

STANDARD MODEL CAPACITIES TO 5000 POUNDS

SAFETY of OPERATION is inherent in the PORTELVATOR mechanical lift principle, which transmits power through worm, worm gear, and screw.

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THE Hamilton TOOL COMPANY
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Dependable
MEASURING & CHECKING EQUIPMENT

and Now
HAND WHEELS, KNOBS, HANDLES
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Non-rusting — good looking

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We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
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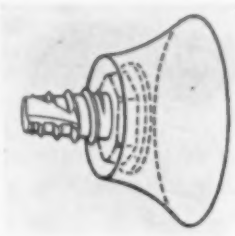
For more details circle NED-6329 on enclosed inquiry slip

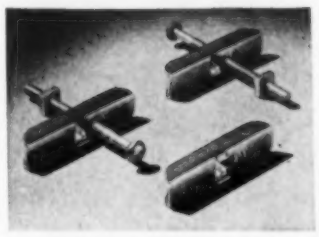
PANCAKE HEAD SCREW
for molding into rubber or plastic



The combination pancake-hexagon head of Shakeproof type 25 thread-cutting screw provides good holding power when molded into rubber suction cup or plastic holder. After molding, cup can be fastened by means of screw to plastic tray bottoms, containers, housings for electronic equipment, plus wide variety of plastic articles designed for mounting by suction cup. Spaced threads of screw, together with large thread-cutting slot, provide low driving torque for easy entry into wood or plastic without chipping or breaking. Made by **Shakeproof Inc.**, Dept. K, St. Charles Rd., Elgin, Ill.

For more details circle NED-6330 on enclosed inquiry slip

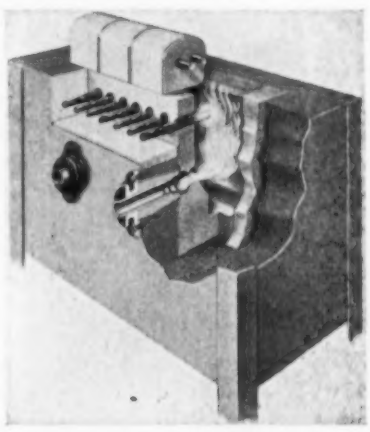
TOGGLE BOLT
for 1/8 to 1/2-in. bolt diameters



Designed for installation either with head of bolt or with nut outside of wall, Super-Grip 3-in-1 toggle bolts can be purchased separately for use with any bolt. Toggle head is stocked for bolt diameters from 1/8 to 1/2-in. Made by **Super-Grip Anchor Bolt Co.**, 3333 N. 22nd St., Philadelphia 40, Pa.

For more details circle NED-6331 on enclosed inquiry slip

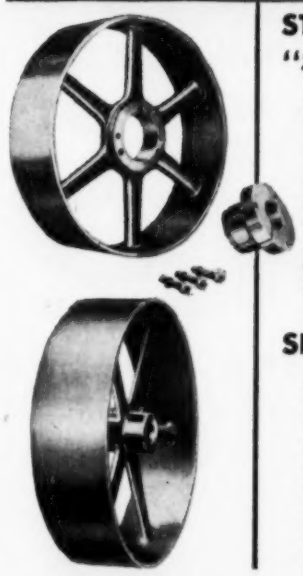
FORGING & HARDENING FURNACE
confines heat to point of tool



High speed and alloy chisels and tools can be heated for both forging and hardening in this FORGEtrol furnace. True cold-shank heating is provided, and temper of shank is retained during tool redressing. Tools frequently can be handled without tongs. Furnace affords fast, uniform heating at controlled temperatures from 1200° to 2800° F. Several sizes are available with either manual or automatic controls. Made by **Delaware Tool Steel Corp.**, 3342 Market St., Wilmington 99, Del.

For more details circle NED-6332 on enclosed inquiry slip

A Complete LINE OF PULLEYS



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"SURE-GRIP" PULLEYS

Cast iron with straight or crown face. One-piece flanged and split-tapered hub permits easy installation and removal from shaft. Four hubs take care of bore range from ½" to 4¼". "Sure-Grip" Pulleys are available in sizes from 4" to 36" O.D., in face widths from 2½" to 12". From Stock. SEND FOR BULLETIN 493.

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Cast Iron. Available in all types; standard flat belt pulleys, solid or split, single or multiple arm, and flanged, if required. Bronze bushed or ball bearing equipped loose pulleys, conveyor, tapercone and special designs made to customer's specifications. WRITE FOR DETAILED INFORMATION OR CONSULT YOUR INDUSTRIAL DISTRIBUTOR.

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CRANE Cam and Lever
QUICK OPENING
BRASS GATES

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3 Guides to Crane Controls

MUSTS for proper analysis of your Crane Hoist Control Picture

New LOAD-O-MATIC, A-C Crane Hoist Control . . . Diagrams clearly show this control, mechanically applied to hoist. Text and illustrations describe LOAD-O-MATIC'S precision, ease of servicing, safety, and compactness. Speed-torque curves graphically compare performance of LOAD-O-MATIC with other crane controls. Ask for Booklet B-5417.

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WATER BLENDERS

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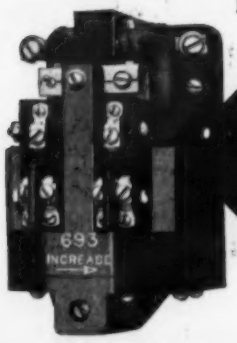
PNEUMATIC
ELECTRONIC

Do you want accurate and dependable timers that are easy to adjust, take small space, and serve many industrial control timing needs? Try these time-tested and proved Cutler-Hammer Timers.



CUTLER-HAMMER BULLETIN 10337 A.C. PNEUMATIC TIMER

We designed this pneumatic timer to cover many of your industrial control timing needs. You can use it on machine tools, conveyors, automatic processing, etc. You will like its small size, 2¾ wide by 4⅞ high, especially where space is at a premium. You can adjust the timing with a screwdriver, from the front. 8 turns of the screw give the entire timing range, from 0.3 seconds to 60 seconds. Reset is practically instantaneous. You can get this timer with one or two timing steps. The two timing steps eliminate the need of one timing relay, and they are independently adjustable.

CUTLER-HAMMER BULLETIN 13522 GENERAL PURPOSE ELECTRONIC TIMER

When you need short or very accurate timing, use this electronic timer. If you want a wide timing range, from 0.15 seconds to 60 seconds, get the standard unit. If you want shorter time settings or narrower ranges for special uses, give us the particulars. The timing adjustment is made by turning the knob of the potentiometer rheostat which has a plainly marked graduated dial. You can mount the rheostat inside the timer case or any place on the machine away from the timer. We build these timers with a heavy duty industrial type relay in the timing circuit. You will like the extreme accuracy of the timer on repeat conditions and in varying air temperatures.

For further information on either timer, write CUTLER-HAMMER, Inc., 1377 St. Paul Avenue, Milwaukee 1, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ont.

CUTLER-HAMMER MOTOR CONTROL C-H

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two sizes for heavy machinery

Usable on permanent or temporary installations, Lev-Ler leveling devices for heavy machinery can be grouted in after leveling or left free for periodical readjustment. They are made in 6 and 8-in. sizes, with 3 and 5-ton lifting capacities and ⅜ and ½-in. vertical rise, respectively. Devices are adjustable in either direction by wrench and are self-locking under load. Made by **Filter & Injector Co.**, 1001 S. Broadway, Springfield, Mo.

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ELECTRIC RECEPTACLE
features improved contact design

Double-contact T-slot design of ChanneLock electric receptacle reduces installation time and provides a positive lock-wire connection. It has a serrated channel stamped under the head of each terminal screw, thereby eliminating the need for bending the wire around the screw before tightening. It is offered in brown and ivory, with and without plaster ears. Made by **Slater Electric & Mfg. Co.**, Dept. T, 56th St. & 37th Ave., Woodside, N. Y.

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is prefabricated and sectional

Assembled without fastening devices, Ever-Ready sectional prefabricated wood shelving is capable of supporting up to 700 lb per shelf or 1½ tons per 3-ft section. Depths of 12, 18 or 24 in. are available in 36-in. length and 84-in. height. For greatest strength, shelf lengths of 24 or 30 in. are recommended. Widths of 36 and 48 in. are obtained by arranging unit sections back to back. Each section is assembled in less than 5 minutes. Vertical divisions are secured by divider clips, and shelves are made of larch or hemlock. Standards will not rust. Made by **National Corp.**, 307 Cleveland St., Orange, N. J.

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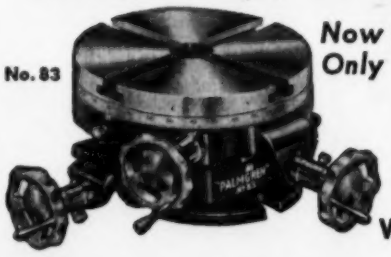
DUAL CROSS and ROTARY FEED

PALMGREN

Rotary, Index, Milling Table



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SPO 385-S1 MILWAUKEE Foundry Equipment Division
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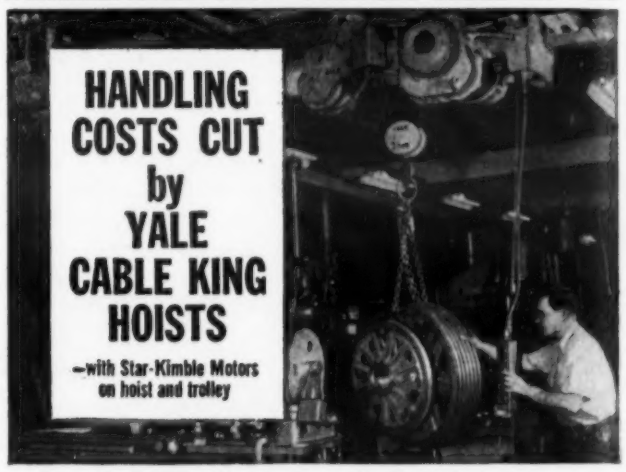

Users of Cable King Hoists made by Yale & Towne report substantial savings in materials-handling time and costs. Hoists are designed for continuous operation, outdoors or in.

Hoist and trolley motors are specially designed by Star-Kimble for these exacting needs. Hoist motor operates under severe hoisting conditions without overheating—is dust-tight and weatherproof. Trolley motor is a Brakemotor—stops smoothly for accurate spotting of load.

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STAR-KIMBLE
MOTOR DIVISION
MIEHLE PRINTING PRESS & MFG. CO.
214 Bloomfield Avenue Bloomfield, New Jersey

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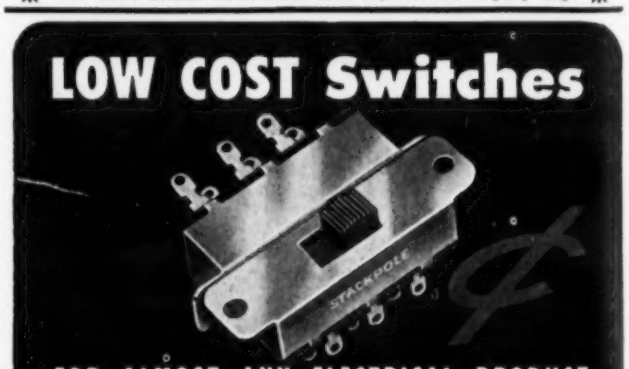

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Double Size Platform

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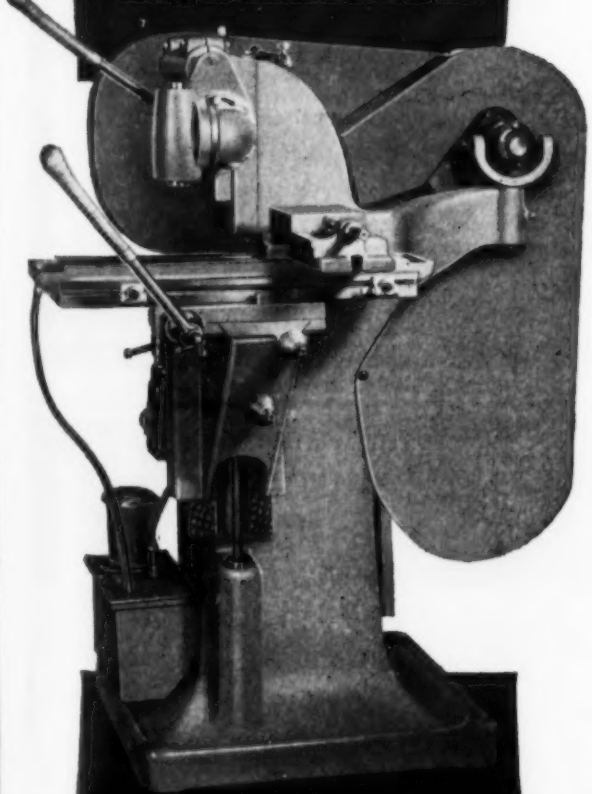
ALL-PURPOSE, HAND-FEED MILLING MACHINES are adaptable to specialized production jobs with a variety of automatic devices.



Our suggestions as to how a U. S. No. 1 Milling Machine can cut costs on your particular production needs, as well as complete data on the basic machine and attachments, gladly furnished on request.

United States MACHINE TOOL CO.
A Division of U. S.-BURKE MACHINE TOOL CO.
BROTHERTON ROAD 2, CINCINNATI 27, OHIO

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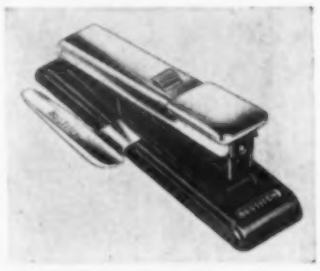
STAPLING MACHINE
serves as tacker, plier and remover



Model B-11 stapling machine is actually a four-purpose tool: tacker, stapling plier, desk stapling plier, desk stapler and staple remover. Floating driver and jam-free action facilitate fastening 32 sheets of ordinary bond paper. A window on the side warms the user of low staple supply. An attached remover blade removes staples with an easy push. Made by **Bostitch, Inc.**, 557 Mechanic St., Westerly, R. I.

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dispenses silicone-treated tissues

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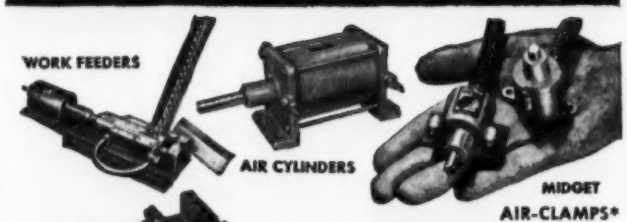

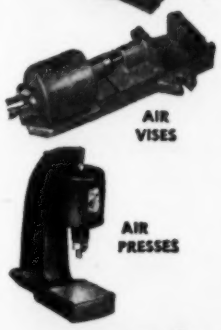

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Submit your tacking problems, with specimens.

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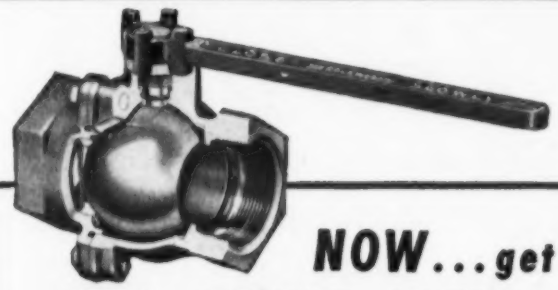

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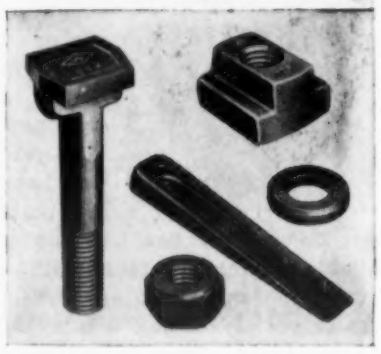
For more details circle NED-6355 on enclosed inquiry slip

INSPECTION LIGHT
desk model uses ultraviolet light

Two 4-w Norco Blacklites with an Angstrom output in the 3600 range supply the light in this desk model inspection Blacklite. Intensity value is about 30 w. A 1 x 2½-in. two-power lens in the head allows use of both eyes for close inspection work. Head measures 6¼ x 2⅞ x 1½ in. and can be adjusted to any position. Operating on 60-cycle, 110-115-v ac current, unit has lamp life expectancy between 2000 and 5000 hours. Made by **Norco Mfg. Co.**, Dept. BLC, 392 Bleecker St., New York 14, N. Y.

For more details circle NED-6356 on enclosed inquiry slip

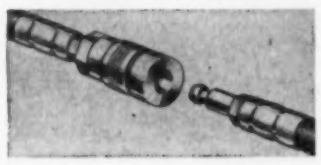
MACHINING SET-UP ACCESSORIES
facilitate machine tool operations



Consisting of strap clamps, T-slot bolts, nuts, flat washers, T-slot nuts and set-up wedges, line of set-up accessories simplifies setting-up of work on planers, shapers, milling machines and other similar equipment. Steel construction withstands severe usage. Accessories are available in ⅜, ½, ⅝, ⅞ and 1-in. T-slot sizes in wide range of lengths. Made by **J. H. Williams & Co.**, Dept. NED-7, 400 Vulcan St., Buffalo 7, N. Y.

For more details circle NED-6357 on enclosed inquiry slip

AIR LINE COUPLER
can be operated by one hand



Push-to-lock, push-to-release design of this coupler for air lines makes possible quick operation with one hand. It is firmly locked while engaged, and increased line pull increases the locking pressure. Coupling provides swivel action and air is automatically cut off when it is uncoupled. Connections are ¼-in. pipe thread. Coupler body and adapter are interchangeable with many other makes. Made by **Nelson Specialty Corp.**, Dept. NE, 440 Peralta Ave., San Leandro, Calif.

For more details circle NED-6358 on enclosed inquiry slip

Waste Hours...or Work Hours in Your Plant?

Why Overwork Three Men This Way...

When One Man Does It Easier This Way

CUT MATERIALS HANDLING COSTS 50% OR MORE!

Year after year, more and more companies have come to learn that Automatic "101" TRANSPORTERS cut their materials handling costs as much as 50% or more, while adding valuable man-power in man-hours saved.

"101" TRANSPORTERS are sturdy, too. To our knowledge every TRANSPORTER manufactured is still in service . . . and tens of thousands have been built.

FREE PROOF in Your Own Plant

to prove you can add man-hours without increasing workload of personnel!

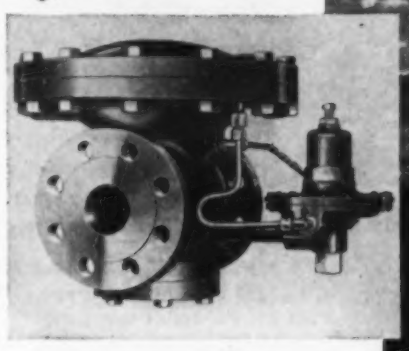
But don't take our word for it! Put a "101" Transporter to the test . . . put it over the severest hauling hurdles in your own plant, absolutely free and without obligation! Write today and we'll arrange for your 3 days' trial. First come, first served. No obligation to buy . . . no strings attached.

"101" Transporter — A PRODUCT OF AUTOMATIC — Lightens LIFE'S LOADS — Trade Marks Reg.

Automatic® 61 W. 87th Street, Dept. K-2, Chicago 20, Illinois

For more details circle NED-6359 on enclosed inquiry slip

THE Old Faithful OF STEAM PRESSURE REDUCTION



Power engineers everywhere have ok'd the FISHER TYPE 92A for steam pressure controll It's an accurate, compact, flexible, sturdy controller, designed, built and proved to meet the **most exacting requirements** for steam service.

WRITE FOR BULLETIN C-3

FISHER GOVERNOR CO. MARSHALLTOWN, IOWA

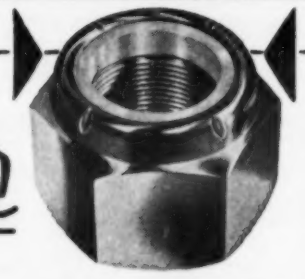
FISHER® TYPE 92A PILOT OPERATED CONTROL VALVE

SINGLE SEATED TIGHT CLOSURE

Two interchangeable pilot assemblies available for high or low pressure service.

For more details circle NED-6360 on enclosed inquiry slip

Up-to-date



FASTENING INFORMATION

Have the answers at your fingertips before fastener problems arise. Write ESNA for the latest bulletin on self-locking Elastic Stop Nuts. We'll include the AN-ESNA conversion chart.

You'll find Elastic Stop Nuts' positive, vibration-proof protection can cut maintenance costs . . . insure that precise adjustments will hold true. The famous Red Elastic Collar prevents loosening due to vibration, keeps locking threads corrosion-free, provides for accurate bolt loading and seals against liquid seepage along the bolt threads. Elastic Stop Nuts are available in more than 3000 different types and sizes—all self-locking, vibration-proof and reusable.

WRITE now for ESNA's help with your present or future fastener problems. Address Dept. N15-737.

ESNA Elastic Stop Nut Corporation of America 2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

For more details circle NED-6361 on enclosed inquiry slip

Drill More Holes Per Hour In ANY Pattern . . . On ANY Drill Press

with a *Adjustable* **MULTI-DRILL**

DRILLS 2 to 8 HOLES at ONE STROKE

Increase production up to 800% . . . save time, cut costs. MULTI-DRILLS make *any* drill press produce *more*. Attached without alterations or special tools. Quick, easy setups of universally adjustable spindles give you more flexibility . . . wider application. Handles any hole pattern within 9" circle; centers close as ½". Extension Spindles available to increase working area to 22½". Special adaptations available.

model 900

DRILLS ANY HOLE PATTERN

See your Commander Distributor for complete details. Write for the NEW Commander Full Line Catalog #851.

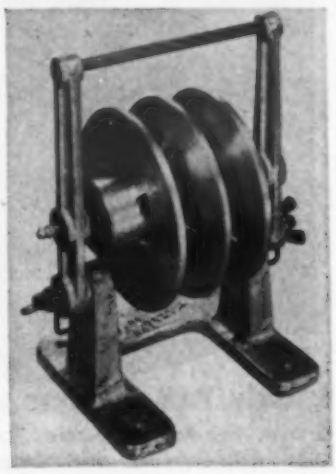
COMMANDER MFG. CO.

4220 W. Kinzie St. • Chicago 24, Illinois

Product of *Commander* . . . Builder of Production Tools

For more details circle NED-6362 on enclosed inquiry slip

VARIABLE SPEED CONTROL



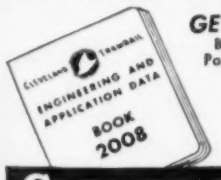
Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including; plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H. P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Advt.**

▲ For more details circle **NED-6363** on enclosed inquiry slip ▲

A steel fabricator replaced an I-beam crane system with modern Cleveland Tramrail equipment and thereby doubled his tonnage output. This is a typical story, because regardless of size or type, most Cleveland Tramrail installations pay for themselves within a few months.

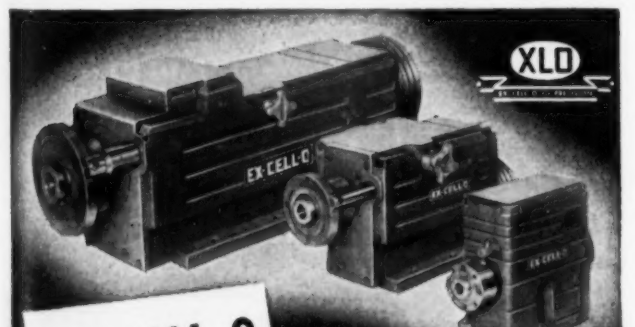


GET THIS BOOK!
BOOK No. 2008
Packed with valuable information

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6639 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

▲ For more details circle **NED-6364** on enclosed inquiry slip ▲



EX-CELL-O HYDRAULIC POWER UNITS

. . . For Your Special Purpose Machines

Ex-Cell-O Hydraulic Power Units provide a compact, flexible source of power for feeding, rotating and retracting cutting tools. They are especially suitable for automatic drilling reaming and counterboring, using a single tool held directly in the spindle nose, or using two or more tools in a multiple spindle head. Three standard units are available—styles 28-A, 21 and 20, shown above. For full information send for Bulletin 45361.

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN
51-4

▲ For more details circle **NED-6365** on enclosed inquiry slip ▲

LATHE CENTERING DEVICE
has precise micro-screw adjustment

This centering device and taper turning attachment for lathe tailstocks is made with No. 2 Morse taper shank and with No. 3, 4 or 5 Morse taper shank. Size range makes tool applicable to lathes from bench type to the extra heavy duty type. Attachment fits into the tailstock, eliminating special fitting or machining for immediate use. Graduated Micro-screw actuates the 60-degree center in either direction with positive locking at any position. Tapers up to 3 in. per foot can be turned by using graduations indicated on face plate. Made by **Master-Taper Co.,** 4533 N. Beacon St., Chicago 40, Ill.

▲ For more details circle **NED-6366** on enclosed inquiry slip ▲

AIRLESS BLAST CLEANING BARREL
integral conveyor tumbles castings and reverses to unload machine

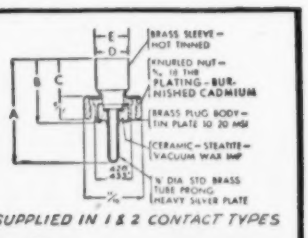
Offered in 6 and 12 cu ft capacities, this type GN airless Rotoblast Barrel features high production, improved cleaning and minimum loss of abrasive. Work conveyor is driven by hardened steel chain and has cast ductile slats which do not pinch work. When the barrel is operating, conveyor travels upward to tumble the castings. After the cleaning operation, direction of conveyor is reversed and load is discharged into the work loader. Automatic safety stops barrel in case of jams in both loading and unloading directions.

Abrasive-tight door retains abrasive in machine and permits economical use of newer types of abrasives. Rubber lined door slides out of the way on rollers in a mechanized labyrinth when actuated by crank. Quick-acting work loader delivers entire load into machine, and all controls are conveniently located.

During barrel operation, cleaning and reclaiming system works constantly, removing all sand and debris and maintaining full efficiency of the abrasive. A rotary scalper wheel removes large fragments, and the abrasive drops through a screen. Spent abrasive and sand are removed from machine automatically, and good abrasive is returned to storage container for reuse. Made by **Pangborn Corp.,** 140 Pangborn Blvd., Hagerstown, Md.

▲ For more details circle **NED-6367** on enclosed inquiry slip ▲

Ideal for
ANTENNA CONNECTIONS
PHOTO-CELL WORK
MICROPHONE CONNECTIONS



SUPPLIED IN 1 & 2 CONTACT TYPES

JONES
SHIELDED TYPE
PLUGS & SOCKETS

LOW LOSS PLUGS AND SOCKETS FOR HIGH FREQUENCY CONNECTIONS

For quality construction thruout, and fine finish, see diagram above.

101 Series furnished with ¼", .290", 5/16", ⅜", or ½" ferrule for cable entrance. Knurled nut securely fastens unit together. Plugs have ceramic insulation; sockets bakelite. *Assembly meets Navy specifications.*

202 Series Phosphor bronze knife-switch type socket contacts engage both sides of flat plug contacts—double contact area. Plugs and sockets have molded bakelite insulation.

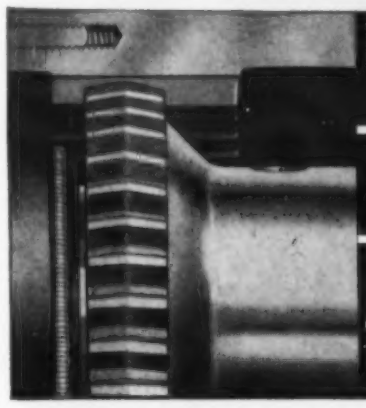
For full details and engineering data ask for Jones Catalog No. 17

JONES MEANS *PROVEN* QUALITY

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP

▲ For more details circle **NED-6368** on enclosed inquiry slip ▲

AJAX DIHEDRAL
COUPLINGS



most MISALIGNMENT CAPACITY
least BACKLASH
all GEARS HARDENED TO 50 TO 55 ROCKWELL C

Exclusive Ajax Dihedral tooth shape provides for maximum misalignment with tooth clearance (backlash) kept to oil film requirements. Positive oil seals keep lubrication in and dirt out. Write for catalog.

AJAX FLEXIBLE COUPLING CO. INC.
Incorporated 1920
WESTFIELD, NEW YORK

▲ For more details circle **NED-6369** on enclosed inquiry slip ▲

Drawing Reproduction revolutionized
with Kodagraph Autopositive Paper

There are no limitations now on the types of drawings, prints, or documents which can be reproduced at Sikorsky Aircraft, Div. of United Aircraft Corp.

Translucent or opaque—it doesn't matter; even "two-sided" originals can be reproduced on *Kodagraph Autopositive Paper.* And each print is a sparkling intermediate—dense photographic black lines on durable, evenly translucent white paper—*ready* to produce as many direct-process prints as are needed.

How positive photographic intermediates are produced: Autopositive Paper is exposed in Sikorsky's direct-process machine . . . processed in standard photographic solutions. No negative step . . . no darkroom handling —*a revolutionary, economical operation that speeds print service to all departments!*

- **The direct-process prints and blueprints** received from vendors are reproduced on Autopositive Paper when extra copies are needed for the drafting room or shop. Deletions and additions can be made readily on Autopositive intermediates . . . saving drafting time.
- **Six copies are needed of each oscillograph record** obtained while flight-testing Sikorsky helicopters. Autopositive intermediates—which hold the faintest line—are made . . . and used to produce direct-process prints which are sharp and legible in every detail.
- **Engineering department reports,** charts, letters, etc. are reproduced on Autopositive Paper so that the required number of direct-process prints can be made in fastest time. A local blueprinter handles the "overflow" demand for Autopositive intermediates.

Write for a free copy of "New Short Cuts and Savings," which gives typical examples of the way Kodagraph Autopositive Paper is saving time and dollars in thousands of drafting rooms.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

▲ For more details circle **NED-6370** on enclosed inquiry slip ▲

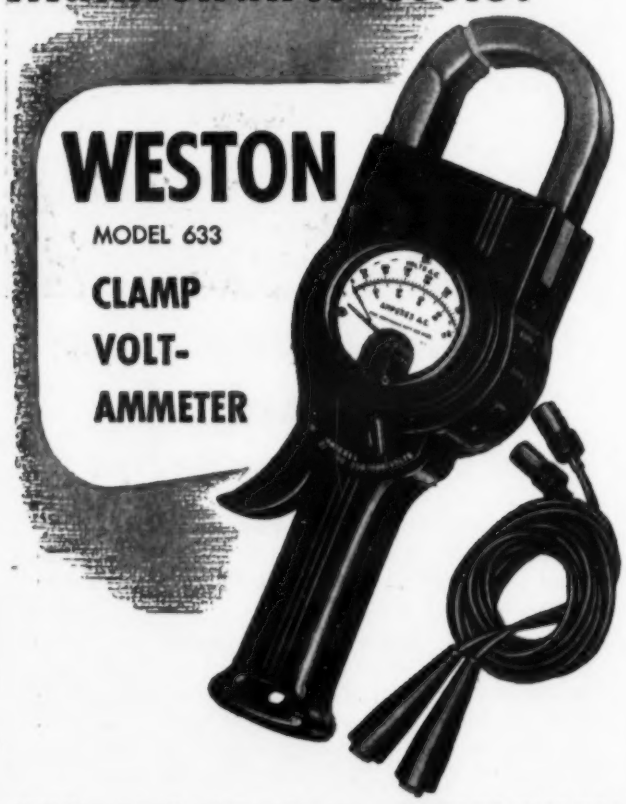
FLAT HEAD SOCKET CAP SCREWS
for assembly of THIN-SECTION MATERIALS

Maximum head contact, flush surface assembly, non-slip internal wrenching, high shear and tensile strength are features of these precision fasteners. SPS recommends *Standards*. Sizes from #4 to ¾" available from your UNBRAKO distributor's stock. Write for your copy of UNBRAKO *Standards*. STANDARD PRESSED STEEL Co., Jenkintown 24, Pennsylvania.

UNBRAKO SOCKET SCREW DIVISION **SPS** JENKINTOWN PENNSYLVANIA

For more details circle NED-6371 on enclosed inquiry slip

It puts the Squeeze on Maintenance Costs!



A-C Current—five full scale ranges of 1000/250/100/25/10 amperes, with range overlap for good readability. Measurements under 10 amperes readily obtained.

A-C Voltage—three self-contained ranges of 700/350/175 volts insure accurate readability, in upper half of scale. Instrument insulated for 750 volt service.

Isolated Voltage and Current—with circuits insulated from each other, instrument can be connected to both voltage and current sources at same time.

Convenient 6 position switch—easily operated with gloved hand, a flick of the thumb selects any current range, or the Volts position.

Adjustable pointer stop—red stop facilitates measuring starting current of motors.

Here's the instrument that produces big savings by slicing hours off maintenance schedules . . . produces worth-while revenue by forestalling costly repairs and shutdowns. Built to WESTON standards of safety, accuracy and dependability. Also available for A-C Ampere measurement only. Order through your local representative, or write . . . WESTON Electrical Instrument Corporation, 617 Frelinghuysen Ave., Newark 5, N. J. . . . *manufacturers of Weston and Tagliabue instruments.*

WESTON TAG

WESTON *Instruments*

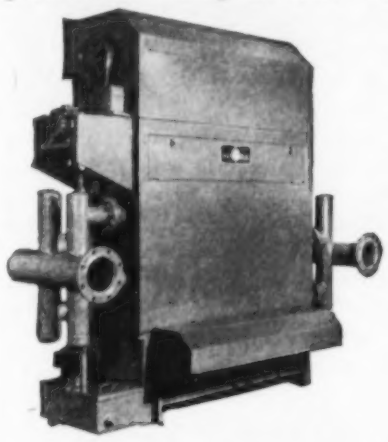
9566

. . . TO INDICATE—RECORD—CONTROL

For more details circle NED-6372 on enclosed inquiry slip

COMPRESSED AIR COOLER
for outdoor installation is improved for greater cooling

Improved distribution of compressed air and an increase in evaporating surface are features incorporated in redesigned Aero aftercooler for compressed air or gases. Tube sizes have also been increased to reduce friction. Unit's cooling capacity is now 25 to 75 per cent over that of previous models. Designed for outdoor installation, cooler provides clean compressed air to industrial processes and equipment. Freezing is prevented in winter by automatic control which shuts off cold air from spray chamber.

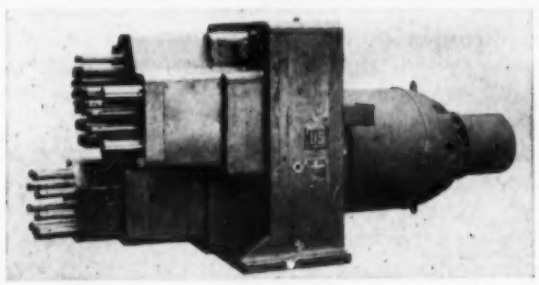


Air at atmospheric wet bulb temperature, which is cooler than average summer temperature of surface cooling water, acts as cooling medium. Compressed air is always cooled below dry bulb temperature to prevent condensation in air lines and damage to pneumatic tools, paint spray equipment and plant processes. Made by **Niagara Blower Co.**, Dept. E.D., 405 Lexington Ave., New York 17, N. Y.

For more details circle NED-6373 on enclosed inquiry slip

38-SPINDLE TAPPER
features safety tap holders

Fine and coarse threads can be tapped in large or small diameters by a 38-spindle tapper as each tap has its own lead screw, lead of which is identical

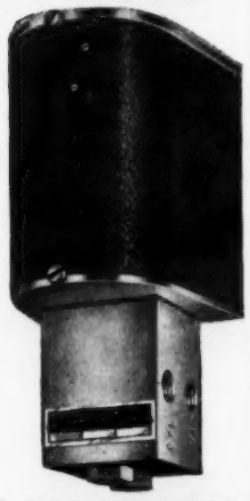


with the tap. Built to operate in conjunction with two additional lead screw tapping heads on a three-way machine, this head has spindle stroke that can be varied with requirements of each hole. Time cycle for representative part is 8 seconds. At 80 per cent efficiency and including loading and unloading time, production is 97 pieces per hour. Each spindle has safety tap holder which eliminates tap breakage. Overall length of unit is 79 in. Motor is optional. Made by **U. S. Drill Head Co.**, Dept. K, 616 Burns St., Cincinnati 4, O.

For more details circle NED-6374 on enclosed inquiry slip

4-WAY SOLENOID OPERATED AIR-VALVE only $32.50

For Fast Operation of Cylinders up to 3" Diameter



Compact sturdy construction, precision engineered for long, uninterrupted heavy duty operation.

Has small, well protected solenoid—operates small cylinders up to 3" dia. and larger cylinders where unusual speeds are not required.

Quantity and O.E.M. discounts. Write for description, discounts, etc.

IMMEDIATE DELIVERY

3-WAY VALVE
Same Design
only $19.80

AUTOMATIC VALVE CO.
37425 GRAND RIVER AVE., FARMINGTON, MICH.

For more details circle NED-6375 on enclosed inquiry slip

Only P&H Welders have this feature
for faster, easier, sounder welds on non-ferrous and "hard-to-weld" metals

No other welder has this Instantaneous Control feature. It lets you handle "hard-to-weld" metals with ease—aluminum, magnesium, brass, copper, stainless, high alloy, high and low carbon steels. Check these features:

- **P&H Dial-lectric Control** — No moving coils or cores to bind or freeze. Maintenance is absolutely negligible.
- **Built-in high frequency unit** — eliminates additional external equipment. Variable frequency control.
- **Automatic gas and water control** — Pre-set automatic time delay control (2 seconds to 2 minutes) prevents electrode contamination, assures clean, sound welds.
- **Stepless amperage regulation** — from 10 amps to maximum. Three models available — ranges 200, 300 and 500 amps.
- **Unusual arc stability** — Makes good clean welds where extremely low amperages are required.
- **Selector switch**—gives operator instant choice of standard or high frequency unit.

No wonder P&H AC Welders are the choice of the aircraft industries where top quality work and speed are "musts". They join "hard-to-weld" metals faster and easier — eliminate rejects for you, too. Get full details from your P&H representative or write us for further information.

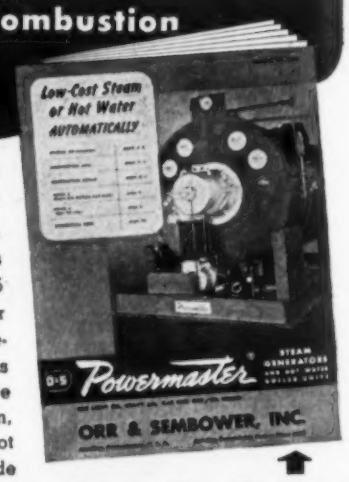
WELDING DIVISION
P&H HARNISCHFEGER CORPORATION
4537 W. NATIONAL AVENUE
MILWAUKEE 14, WISCONSIN

Power Shovels • Crawler and Truck Cranes • Overhead Cranes • Hoists • Arc Welders and Electrodes • Soil Stabilizers • Diesel Engines • Pre-Fabricated Homes

For more details circle NED-6376 on enclosed inquiry slip

Powermaster®
PACKAGED AUTOMATIC BOILERS with VORIFLOW® Combustion

Save Fuel and Man Hours!



For light oil, heavy oil, gas and gas/oil firing. Steam generating units from 15 to 500 HP.—15 to 250 p.s.i. Hot water boiler units 30 p.s.i. Reduce operating costs as much as 40% — save man-hours — get clean, dependable heat and hot water. A.S.M.E. Code construction.

Write For Bulletin

ORR & SEMBOWER, INC.
930 Morgantown Rd., Reading, Pa.

BUILDERS OF DEPENDABLE BOILERS SINCE 1885

For more details circle NED-6377 on enclosed inquiry slip

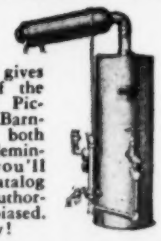
PURE WATER
DISTILLED WATER?

PROBLEMS SOLVED WITH *Barnstead* EQUIPMENT
DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

WRITE

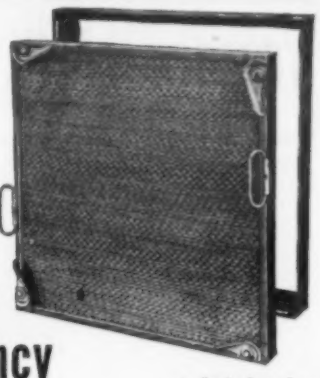


Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

First in Pure Water since 1878

Barnstead STILL & STERILIZER CO.
16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

For more details circle NED-6378 on enclosed inquiry slip



space saving
HV FILTER
has longer life
greater efficiency

today's best buy is better air!

AAF's new High Velocity filter handles the same air volume in 1/3 the space of standard unit filters. It operates effectively at velocities from 300 to 500 fpm and maintains uniform efficiency over this wide range of velocities. It's the exclusive *pyramid pocket* filtering media that makes the difference!

The H-V's low resistance, large dust capacity and longer life make it a superior unit for limited space conditions.

Available in all standard sizes and 1", 2" and 4" depths. Engineering Bulletin #203 gives complete information and technical data. Write for it today.

AAF American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Ky.
American Air Filter of Canada, Ltd., Montreal, P. Q.
Pacific Division Office, San Francisco, California

▲ For more details circle NED-6379 on enclosed inquiry slip ▲

Generalift ★★★★★ PALLET BOXES

SEND FOR FREE BOOKLET TODAY

GENERAL BOX COMPANY.. ★★★★★ engineered shipping containers

GENERAL OFFICES: 1859 Miner St., Des Plaines, Ill.
DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N.J., Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc., Houston, Dallas. General Box Company of Mississippi, Meridian, Miss.

▲ For more details circle NED-6380 on enclosed inquiry slip ▲

NEW JACK LOCATES ON ANCHOR BOLT

Empco JACK STYLE JS

- SELF-ALIGNS TO UNEVEN FLOOR
- EASILY LIFTS 8,000 LBS.
- SIMPLY TURN ADJUSTING NUT TO RAISE OR LOWER MACHINE
- VI-SORB MOUNTING PADS ABSORB VIBRATION

Where anchor bolts are used, this new Empco Jack Style JS will save considerable time in setting and keeping equipment level.
Tested to support 20 tons and lift 8,000 lbs., this Empco Jack is the answer to any machine installations. Anchor bolt hole through the jack assembly allows clearance for ¾" diameter bolt. This permits the Empco Style JS Jack to be used at the *precise spot* where equipment was designed to be best supported.
Available in three sizes: 1¾", 2", and 3" (minimum heights) with VI-SORB mounting pads as optional equipment.
Write for specifications and prices of complete line of Empco Leveling Jacks.

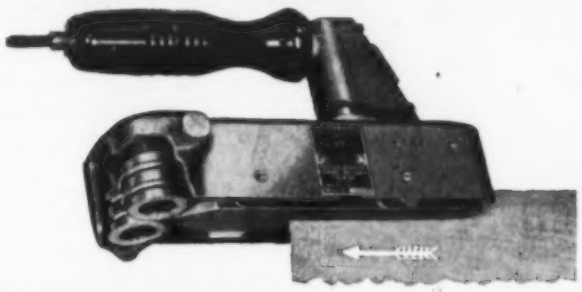
EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

▲ For more details circle NED-6381 on enclosed inquiry slip ▲

HAND ROTARY SEALER
makes tight seals at splices

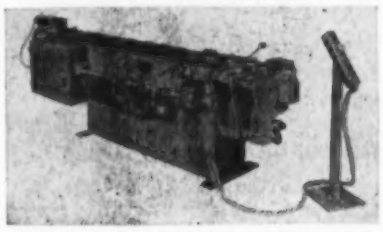
Vapor and moistureproof seals can be made at points where material is of extra thickness with this hand model rotary sealer. This is accomplished by form-



ing double grooves in the seal. Model G sealer, developed for military packaging that requires large bags, barriers and innerliners of kraft-backed and scrim-backed laminates, makes seals with once-over forward operation at speed of about 30 fpm. The 5-lb unit has provision for "soaking" when more heat is required on extra thicknesses or on thermoplastics. Dimensions are 10½ x 4 x 6 in. Made by **Techtmann Industries**, Pack-Rite Machines Div., 407 E. Michigan St., Milwaukee 1, Wis.

▲ For more details circle NED-6382 on enclosed inquiry slip ▲

TUBE BENDER
suited for production or test runs on ferrous and nonferrous tubing



Incorporating an operating circuit that permits individual control of all functions at any time during the operating cycle, aircraft size ¾ tube bender can be used for short or test runs, as well as for production use. Mandrel, clamp die and pressure die operate automatically or independently, allowing tooling results to be checked easily at any given point. A workpiece can be formed, checked and replaced in the bender for additional bending. Included in design are pick-off angle-of-bend turret and removable location-of-bend stop assembly for repeat setups.

Optional equipment includes Parker-type twin stud bending forms, calibrated bending scale and adjustable light fixture. Machine requires floor space of 33 x 130 in. (3 ft shorter than previous models) and accommodates 7 ft tube length. Base extensions are available for longer tube length. Stainless steel tubing of 1 in. 16-gage, IPS extra heavy pipe up to ¾-in. and nonferrous metals of 1¼ in. with 0.134-in. wall can be handled. Maximum standard radius adjustment is 10 in. Made by **Pines Engineering Co.**, 601 Walnut St., Aurora, Ill.

▲ For more details circle NED-6383 on enclosed inquiry slip ▲

100% CONCENTRICITY AND HARDNESS TESTS ASSURE ACCURACY—SUPERFINISH BORES ASSURE LONG LIFE OF UNIVERSAL DRILL BUSHINGS

153-A

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN

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✓ DRILLING ✓ BENDING
✓ TAPPING ✓ RIVETING

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

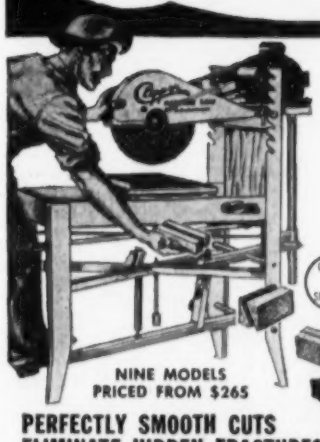
Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.
Complete with Foot Control, Air Hose and Fittings.....only $29.90

Prompt Delivery from Your Supplier or Write Direct
W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

▲ For more details circle NED-6385 on enclosed inquiry slip ▲

LOOK JOE !... Make These Cuts with a CLIPPER...Let's Stop "DOWN-TIME" Delays!



Any SPECIAL SHAPES
SKEWS, SPLITS, ANGLES, SOAPS

CUT IN SECONDS WITH A DUSTLESS... CLIPPER MASONRY SAW

NINE MODELS PRICED FROM $265

CUT IN 19 SECONDS · CUT IN 11 SECONDS · CUT IN 12 SECONDS · CUT IN 17 SECONDS · CUT IN 13 SECONDS · CUT IN 24 SECONDS · CUT IN 7 SECONDS

PERFECTLY SMOOTH CUTS
ELIMINATE HIDDEN FRACTURES, EXCESS MORTAR & DOWN-TIME

Speed REPAIR or CONSTRUCTION of your Furnaces, Kilns and Boilers by using a CLIPPER MASONRY SAW

DUSTLESS...MASONRY CUTTING

With the MODEL HD CLIPPER you can choose your cutting method...cut DUSTLESS (wet) in confined areas or DRY when DUST is not a problem. Remember too, there are NINE Clipper Models designed to perform with smooth simplicity and flexibility.

Free Trial

The outstanding policy of FREE TRIAL has been in effect since Clipper invented the world's first masonry saw. Only thru this CLIPPER FREE TRIAL are you guaranteed ... ACTUAL TEST ON THE JOB ... FULL SATISFACTION ... NO OBLIGATION!

PATENTED CLIPPER FEATURES

AUTOMATIC BLADE PRESSURE
Makes your blades last longer... Because Equalizer Spring Automatically cushions blade pressure whether cutting HARD or SOFT materials; gives greater blade economy.

SELECT-A-NOTCH
One man easily adjusts Cutting Head to desired height...whether cutting 12" or 1" material. Operator's hands merely guide. Weight supported by rear Bar.

SAVE-A-BLADE DIAL
Just turn the Save-A-Blade Dial to the material hardness and the pressure Equalizer Spring automatically sets the tension—guarantees faster cutting and longer blade life.

Clipper

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BUILDING FLOORS—STREETS—WALKS
CLIPPER CONCRETE SAWS...
5 MODELS—GAS OR ELECTRIC POWER

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CLIPPER MANUFACTURING COMPANY
Room 401, 2800 Warwick, Kansas City 8, Mo.
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☐ NEW CLIPPER MASONRY SAWS ☐ CLIPPER CONCRETE SAW
☐ DUSTLESS Model HD ☐ FREE TRIAL
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NAME _____
ADDRESS _____
CITY _____ STATE _____

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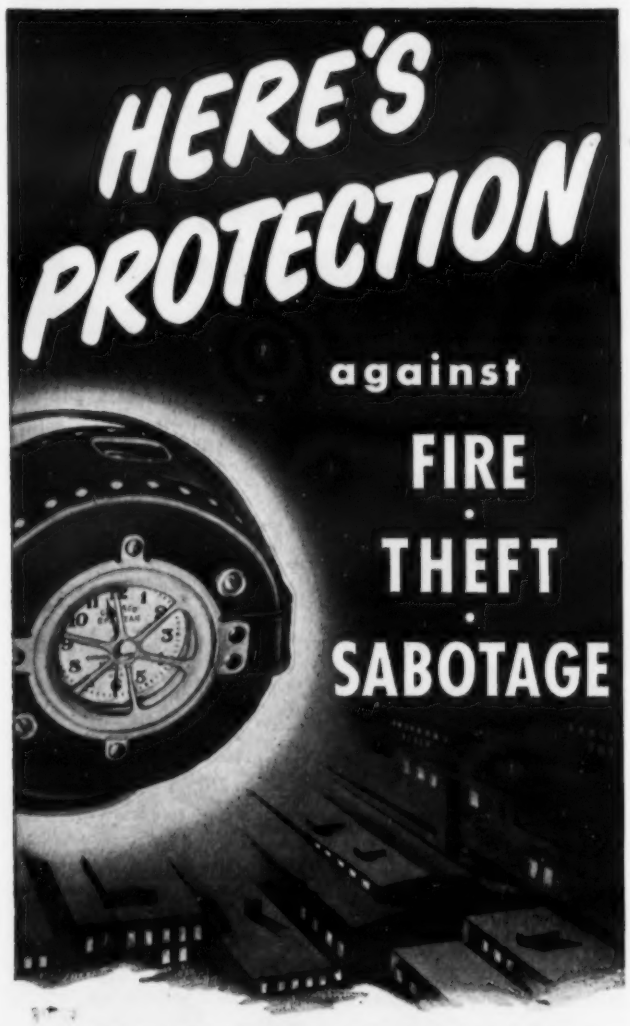
P-M is a new Bulk-Handling Method

Prime-Mover is used to expedite the handling of bulk materials. Here is a new method to stop waste of time and men on jobs that are now done by hand or other slow means. Information to help you buy is available on request.

THE PRIME-MOVER COMPANY
MUSCATINE, IOWA

The Bell PRIME-MOVER

For more details circle NED-6387 on enclosed inquiry slip



CHICAGO Watchclock System

"The first . . . and still the first."

LOWERS YOUR INSURANCE RATES!

It keeps track of your watchman's tracks—so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCHCLOCK System quickly returns its small cost to you.

Write for FREE *new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property. Write for it NOW!*

CHICAGO WATCHCLOCK
DIV. GREAT LAKES INDUSTRIES, INC.
1522 S. WABASH AVE., CHICAGO 5, ILL.
OFFICES IN PRINCIPAL CITIES

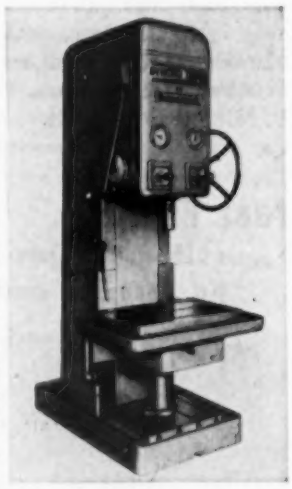
For more details circle NED-6388 on enclosed inquiry slip

METAL MITERING TOOL
2-lb tool fits in pocket

On-the-job mitering of metals can be performed with clean and accurate cuts by the Metalmitre, a 2-lb hand-operated tool. Leverage developed by squeezing the handles together allows it to miter, notch or slot nonhardened steel up to 1/32-in. and metals like copper and aluminum up to 1/16-in. with its interchangeable dies. It can also cut molding, sheet metal, fiberboard, plastics and Masonite. Made by **Lander & Abbott,** Dept. 31, P. O. Box 336, La Crescenta, Calif.

For more details circle NED-6389 on enclosed inquiry slip

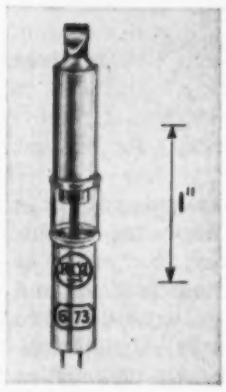
DRILLING MACHINE
drills 1¼-in. hole in steel



Constant full-rate horsepower delivery under all conditions of speed and feeds is provided by Barnes-driL Syncro-Torque drive drilling machine. Wide range of infinitely variable feeds and speeds are available at full power capacity. Machine has a 21-in. swing and 1¼-in. hole drilling capacity in steel. Made by **Barnes Drill Co.,** 866 Chestnut St., Rockford, Ill.

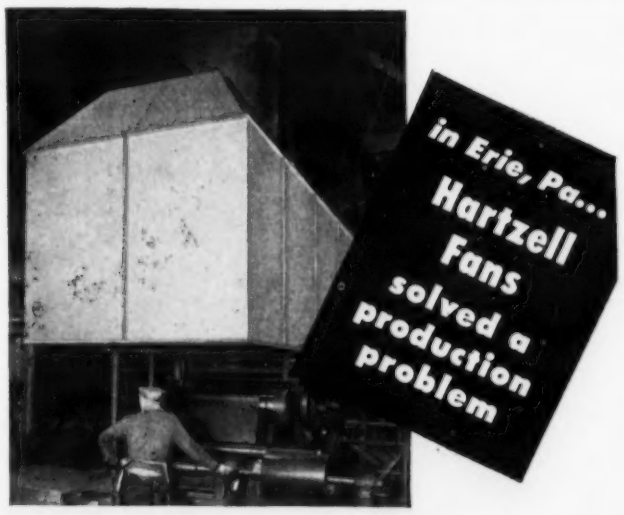
For more details circle NED-6390 on enclosed inquiry slip

DIODE TUBE
pencil type smaller than cigarette



Weighing less than 1/5-oz, RCA-6173 diode tube of the pencil type is smaller in length and diameter than a cigarette. For ultra high frequency use, it measures less than ¼-in. diameter and slightly over 2 in. long. Tube is designed for use with coaxial and wave guide type transmission lines, or in pulse detection and pulse power measuring service at frequencies up to 3300 megacycles per second. Features include low heater wattage requirement and coaxial electrode structure of double-ended metal-glass type. Made by **Radio Corp. of America,** RCA Tube Dept., Harrison, N. J.

For more details circle NED-6391 on enclosed inquiry slip



Noxious fumes from machines used for coating roofing materials were crippling production in this Erie, Pa. plant. Under certain weather conditions, the plant was forced to close down completely. All production stopped, money and time were lost.

Then the Hartzell field engineer was called in. He made a careful survey and specified Hartzell ND36-F-BDS Belt Drive Duct Fans, especially constructed for high temperature service. These fans did the trick, and are saving this manufacturer real money. Why not find out what Hartzell fans and blowers can do to boost your plant's production? Write now for information.

HARTZELL PROPELLER FAN CO.
DEPT. G DIV. OF CASTLE HILLS CORP. PIQUA, OHIO
engineering representatives in principal cities

For more details circle NED-6392 on enclosed inquiry slip

TRUSCON COMMERCIAL PROJECTED STEEL WINDOWS

economical, efficient steel windows for a wide range of industrial buildings

These steel windows are highly versatile . . . attractive in appearance, economical in cost, easy to install, simple to screen, convenient to operate, and inexpensive to maintain.

In Truscon Commercial Projected Windows, units with vents opening outward predominate among the standard designs. However, a number of designs have vents opening inward, while others have both types of vents combined in the same unit. Ventilators do not project beyond one face of the window plane when open. Write for free illustrated literature describing the entire line of Truscon Steel Windows.

TRUSCON® STEEL COMPANY
1096 ALBERT STREET
YOUNGSTOWN 1, OHIO • Subsidiary of Republic Steel Corporation

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Aeroquip
REG. TRADE MARK

FLEXIBLE HOSE LINES CUT COSTS

The "Aeroquip Idea" saves time, saves money, reduces inventory. To make your own Hose Lines, simply cut bulk hose to the required length and attach an Aeroquip reusable fitting.

AEROQUIP CORPORATION
JACKSON, MICHIGAN

FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

For more details circle NED-6394 on enclosed inquiry slip

Don't Say Resistors

Specify DAVOHMS
The Complete, Superior Line of Precision
WIRE WOUND RESISTORS
Made Only By DAVEN
ELECTRONIC SPECIALISTS FOR MORE THAN A GENERATION

- Accuracies to .05%
- All Temperature Coefficients
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- Specially Coated with Tough Formex Insulation
- Manufactured to Famous Daven Standards of Precision
- One Recognized Source for All Of Your Requirements in Resistors

Write for detailed bulletin
THE DAVEN CO.
199 Central Avenue • Newark 4, N. J.

For more details circle NED-6395 on enclosed inquiry slip

TAILORED TO YOUR JOB

For Low Cost Per Gallon Pumped

HERE'S HOW it's engineered for your job! You start with the standard pedestal-mounted pump with its rigid cast iron pedestal; two heavy duty oil lubricated bearings; and big oil reservoir. Then, working with A-C engineers, the optional constructions are selected.

Shaft, sleeve, impeller, and wearing rings are all available in many types of material. In addition, six alternate sealing arrangements, including a water-cooled stuffing box, are available. Result: Low cost per gallon pumped!

Capacities to 1200 gpm, heads to 250 feet, temperatures to 500 degrees F. Call your nearby A-C district office or write Allis-Chalmers, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS A-3617

For more details circle NED-6396 on enclosed inquiry slip

STORAGE RACKS

Now, you can increase your storage space 200% to 600% with Barrett steel Sectional Racks—use *all floor to ceiling area.* For barrels, drums, open stock, boxes, skids, etc. Stock always accessible for fast handling—quick inventory—no rehandling. Compact Barrett Racks cut handling costs 25% to 65%—utilize overhead space—frequently eliminate need for extra storage buildings.

Standard designs—many features—quickly installed—inexpensive. Write for prices. Ask for Bulletin 5221.

BARRETT-CRAVENS COMPANY
4623 S. Western Blvd., Chicago 9, Ill.
Representatives in All Principal Cities.
Canadian Licensee: S. A. Armstrong, Ltd., Toronto

BARRETT
One man does more than 3 or 4...with a Barrett

For more details circle NED-6397 on enclosed inquiry slip

A Basic Tool

POCKET-SIZE VOLT-OHM-MILAMMETER With Self-Contained Resistance Ranges to 3 Megohms.

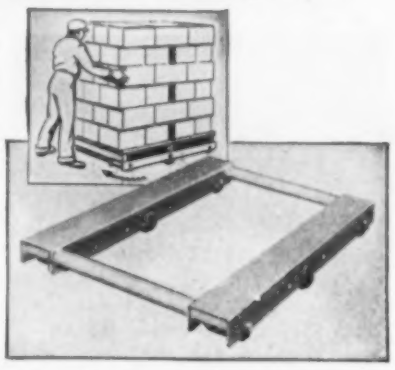
Note the wide ranges of this compact design. Note controls, flush with panel. Enclosed selector switch keeps dirt out, retains contact alignment permanently. Resistors, shunts, rectifiers housed in molded base integral with switch; no chance for shorts. Resistors are precision film or wire-wound types, each in its own compartment. Inside view shows details. Batteries easily replaced—positive grip coil assures permanent contact.

$26.50—AT YOUR DISTRIBUTOR
Prices Subject to Change

FOR THE MAN WHO TAKES PRIDE IN HIS WORK
Triplett
TRIPLETT ELECTRICAL INSTRUMENT CO. BLUFFTON OHIO U.S.A.

For more details circle NED-6398 on enclosed inquiry slip

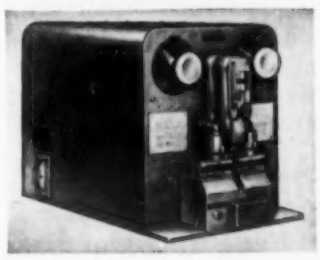
PALLET DOLLY
eases movement in close quarters



Loaded pallets can be turned easily in close quarters when moved on a No. 704 pallet dolly which has a large roller in the center and smaller rollers at each end. With an evenly distributed load on the dolly, weight is balanced on large center roller and end rollers act as stabilizers. Steel rollers have grease seal type ball bearings on a hexagonal shaft. Frame sizes range from 30 x 24 in. to 48 x 48 in. The 30 x 24-in. size weighs 40 lb, yet carries 1 ton. Made by **Samuel Olson Mfg. Co.,** 2423 Bloomingdale Ave., Chicago 47, Ill.

For more details circle NED-6399 on enclosed inquiry slip

CABLE CUTTING MACHINE
uses resistance heating unit



Cable up to ¼-in. diameter can be cut by type A-1 cable cutting machine that uses an air-operated cutter and a resistance heating unit. Pneumatically - operated clamps hold cable while the cutter blade removes a slug from the cable. Clamps also serve as electrical contacts for passing low voltage-high amperage current through the cable and at the same time stretch the cable at the cutting point. Complete operation is automatic, requiring 3 seconds once the cable is positioned. Sheared ends are slightly necked for easier insertion into cable terminals. Made by **James L. Entwistle Co.,** 1477 Elmwood Ave., Pawtucket, R. I.

For more details circle NED-6400 on enclosed inquiry slip

MOLDING PRESS
exerts 1000-ton pressure

Included in line of hydraulic slab-side molding presses is 48 x 48-in. size with a 36-in. ram. Working pressure exerted by press is 1000 tons. Slab-side press is use for slab-sole work and polishing sheet material. Made by **Stewart Bolling & Co.,** 3190 E. 65th St., Cleveland 27, O.

For more details circle NED-6401 on enclosed inquiry slip

NO SEAT!

TO SCORE...WEAR...CLOG...AND LEAK

The Yarway Seatless Blow-Off Valves eliminate the commonest source of trouble and expense with ordinary blow-off valve operations.

The famous seatless principle first introduced nearly 40 years ago, has been constantly improved and adapted to meet modern service requirements.

There is a Yarway Blow-Off Valve for every pressure.

SEND FOR FREE BLOW-OFF VALVE BOOKLET. PLEASE STATE YOUR BOILER PRESSURES.

Cross section of Type "B" Seatless Angle Valve, Flanged.

YARNALL-WARING COMPANY
131 Mermaid Ave., Phila.18, Pa.

YARWAY BLOW-OFF VALVES

For more details circle NED-6402 on enclosed inquiry slip

Cut Polishing Time Improve Surface Quality

with "LINDE" FINE ALUMINA POWDERS

Obtain superior finishes, free from microscopic pits and scratches in a fraction of the usual polishing time. Use less abrasive and use it directly without levigation and other wasteful preparatory steps. They can also be compounded with waxes and used in stick form.

LINDE Fine Alumina Powders are characterized by ultra-fine, uniform particle size, high purity, and swift polishing action. They have gained wide-spread acceptance in polishing materials ranging from metallographic specimens to gemstones and noble metals.

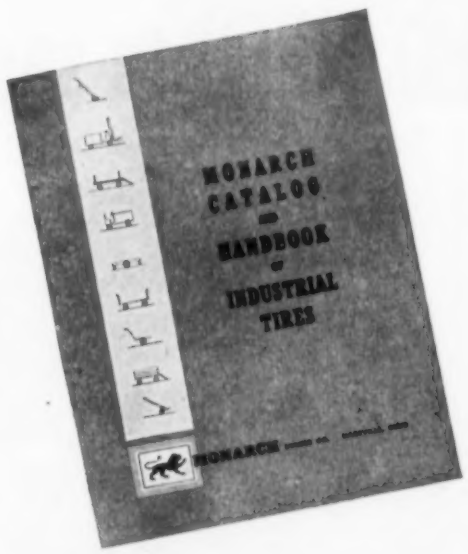
Call or write any LINDE office and we will be glad to discuss your particular polishing applications.

	Type A	Type B
Chemical Composition	Alpha Al_2O_3	Gamma Al_2O_3
Particle Size (approximate)	0.3 Microns	Less than 0.1 Microns
Hardness (Moh's) (Equivalent to crystalline material)	9	8
Crystalline Structure	Hexagonal	Cubic

The term "Linde" is a trade-mark of Union Carbide and Carbon Corporation.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street, New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

For more details circle NED-6403 on enclosed inquiry slip



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on the NEW MONARCH CATALOG

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Your best source for replacement tires is the manufacturer of your vehicles, who can supply you, through his distributors, with Monarch Tires engineered for your application.

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DETROIT OFFICE, 7-255 GENERAL MOTORS BLDG.

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

For more details circle NED-6404 on enclosed inquiry slip

Sheehan's Model "S" PRESS CONVEYOR

OUTSTANDING IN PERFORMANCE!

Companion to nationally known two-plane Model B Press Conveyor, here is another Sheehan conveyor built to save valuable working space. Can be used with Flat-Wire Metal Belts, Woven-wire high Carbon Belts, Fabric or Rubber Belts. Top of loading end of belt is within 8 inches of floor. Positive drive sprockets in loading center of belt assures no belt slippage—oily conditions included. Sprockets can be added or removed from drive shaft by operator depending on load needs (when using flat wire metal mesh belts).

LOWER COST—LONGER LIFE
Sheehan Model "S" Conveyors can solve your Press Room problems!

Write today for literature on sizes, special applications and cost data. You will be surprised at Sheehan's high quality and low prices!

R. T. SHEEHAN CO. PLYMOUTH, MICH.

For more details circle NED-6405 on enclosed inquiry slip

NO NEED to say "IT CAN'T BE DONE"

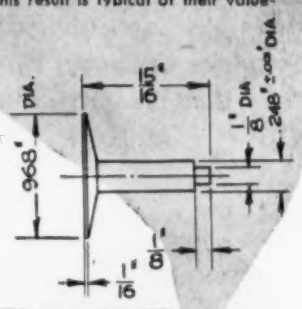
GENERAL ELECTRIC PURCHASING VALUE ANALYSIS

FOUND THE RIGHT SUPPLIER AND SAVED $22,000 PER YEAR*

General Electric engineers are constantly seeking new methods and cost-reducing short-cuts to present ever-increasing values at lowest possible costs. This result is typical of their value-analysis work.

CAMCAR COLD-HEADS THIS PART

Meets All Specifications for Tolerances, Structure and Design; Saves Manufacturing Costs Totalling $22,000 per year.*



You, too, may feel you have a part which can't be cold-headed—but ask a Camcar specialist before you say No! As Specialists in Cold-Headed Parts supply, their skill often far exceeds what is expected. Through combined metal-flow-technology and special tooling abilities, they offer an exclusive source for high volume supply on complex, highly specialized, metal parts.
* General Electric Figures.

When you need fasteners or special metal parts . . .
Telephone S-9451 or Teletype RK 8653

CAMCAR SCREW & MFG. CORP.
601 EIGHTEENTH AVENUE
ROCKFORD, ILLINOIS

"PRODUCTION-DESIGNED FOR YOUR ASSEMBLY LINE"

For more details circle NED-6406 on enclosed inquiry slip

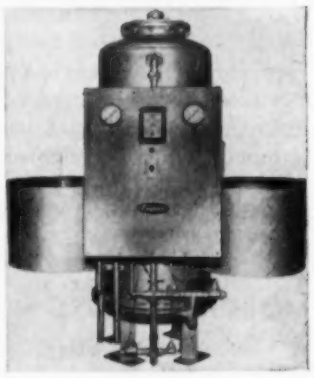
AUTOMATIC CONTROLS for temperature, voltage or current are offered ready-made for mounting

Now available in ready-made assemblies with contact meters, U-Mount-It Simplytrol automatic controls can regulate oven or furnace temperatures, control electrical equipment voltage or current, or serve as remote indicators or safety warning devices. Chassis has hinged brackets for mounting inside equipment or behind panels where it is used.

Contact meters, available in 2½, 3½ and 4½ in. sizes have respective voltage and current ranges of 0-5 millivolt to 0-500 v and 0-20 microamperes to 0-50 amp. Compensated temperature millivoltmeters have −200 to 3000° F range. Contact meters will control on less than 1 microampere, and contact setting is adjustable over full scale arc. Chassis includes transformer and rectifier power supply, plus necessary relays for complete control with contact rating of 15 amp 115 v. Made by **Assembly Products, Inc.**, 1002 Bell St., Chagrin Falls 1, O.

For more details circle NED-6407 on enclosed inquiry slip

EFFLUENT-DEMINERALIZER automatically operating unit employs ion exchange technique

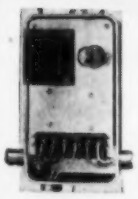


Fully automatic in operation, this Mono-Bed demineralizer is available in flow rates from few gallons to 5000 gal per hour and up, operates at low chemical cost per 1000 gal of treated water and provides effluent with practically zero mineral content. Unit employs ion exchange technique in which cation and strong anion resins are intimately mixed in single tank through which raw water passes only once.

When effluent conductivity falls below standard, treated water is discharged and lights or other warning devices signal need for regeneration cycle. Single switch puts unit through this cycle, including rinsing and recutting in the effluent when desired resistivity or purity is reached. During cycle, tanks refill with water so fresh acid and caustics can be added for next regeneration cycle. Made by **Penfield Mfg. Co.**, 19M High School Ave., Meriden, Conn.

For more details circle NED-6408 on enclosed inquiry slip

Lumenite OFFERS DEPENDABLE AUTOMATIC CONTROLS

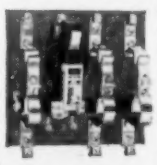


LUMENITE LIQUID LEVEL CONTROLS
Electronic action maintains and/or signals exact levels to 1/100 in. Floatless—no moving parts—sanitary—trouble free—no upkeep. For any liquid in any container—hot or cold—pressure or open. Easy installation. Write for detailed bulletin L-143.

LUMENITE TIMING CONTROLS

Complete line of industrial operation timers—manual or automatic reset. Time switches and timers. Improved and simplified construction. Write for bulletin T-143

LUMENITE MAGNETIC CONTACTORS



Electrically operated and held switches for heavy loads. Work with Electronic Level or Time Controls. Reversing switches—transfer switches. New noiseless operation. Write for bulletin C-143

Lumenite Electronic Co.
407 S. Dearborn St., Chicago 5, Ill.

For more details circle NED-6409 on enclosed inquiry slip

with MULTI-CLEAN ASPHALT TILE PRESERVER and THE MULTI-CLEAN METHOD

"We spend 65% less maintenance time on our asphalt tile floors and have cut our material costs in half since using the Multi-Clean Method," says the maintenance director at Seeger Refrigerator Co., St. Paul, Minn.

Multi-Clean Asphalt Tile Preserver and the Multi-Clean Method apply to old and new asphalt tile floors . . . add years to their life, impart a new beauty-clean appearance and sure footing. No wax is required for a bright and gleaming surface.

Maintenance in the Seeger offices includes daily dry dust mopping and damp mopping with cold water followed by machine buffing with a No. 0 steel wool disc every 3 to 4 days. A new application of Multi-Clean Asphalt Tile Preserver is made 4 times a year.

Write Multi-Clean Products, Inc., Dept. NE-7 for details.

Multi-Clean 9-Job Floor Machine

Multi-Clean Wet-Dry Vacuum

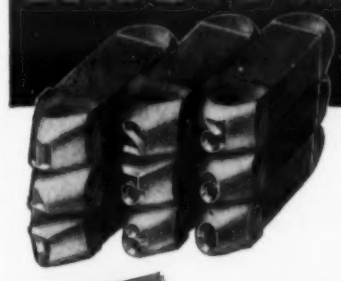
MULTI-CLEAN PRODUCTS INC.
2277 Ford Parkway
ST. PAUL 1, MINNESOTA

free! FLOOR MANUALS—Handy file size, each manual deals with a specific type of floor, its characteristics and care . . . asphalt and rubber tile, terrazzo, concrete, wood, linoleum.

For more details circle NED-6410 on enclosed inquiry slip

WANT MORE EFFICIENT—LONGER LASTING STEEL STAMPS?

USE "SAFETY" WEDGE GRIP LETTERS and FIGURES



- No Spall
- No Mushroom
- More Service
- Knurled Grip
- Patented under No. 2,089,794
- Thumb Side Markings

Write for Bulletin LF-50.

Knurled sides for positive grip—patented design provides perfect balance and deeper impressions. Especially recommended for toughest jobs on steel castings, cylinders, tool steel, etc. All sizes available 1/16" to 1" characters.

M. E. CUNNINGHAM CO.
SAFETY STEEL STAMPS
1055 Chateau Street • Pittsburgh 33, Pa.

For more details circle NED-6411 on enclosed inquiry slip

ROLLAWAY SEMI-LIVE SKIDS AND JACKS

FEATURING THE RE-NU TOP

Steelbound Rollaway Skids combine the best features of bolted and welded designs. The frame supporting members are arc-welded, and the *renewable* hardwood deck is tightly clamped with steel bolts of extra tensile strength. Welded-in, heat-treated, steel connecting pin. Semi-steel rubber-tired or Flor-Savr wheels with Hyatt roller-bearings, heat-treated steel axles.

CAPACITIES: 1500, 2500, and 5000 POUNDS

YALE AND TOWNE ROLLAWAY JACKS are stocked at the Lanham Company's plant and are sold and shipped directly from Louisville for use with ROLLAWAY SKIDS.

SECTIONAL BINS RE-NU TOP SKID PLATFORMS SKID BOXES

THE LANHAM COMPANY
Magnolia & 12th Sts., Louisville, Kentucky

For more details circle NED-6412 on enclosed inquiry slip

new

HANDY SANDBLAST... *Low Price*

Widely used for cleaning dies, tools, pistons, piston rings, valves and other small parts.

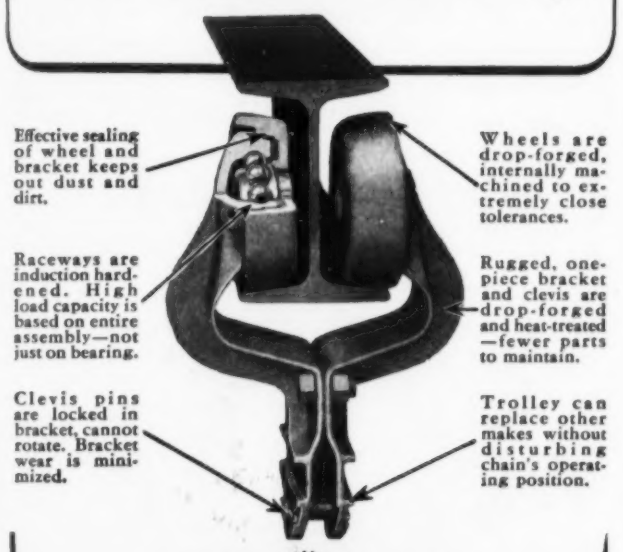
It can be used with soft abrasives, such as ground corn cobs or nut shells, or with hard abrasives such as sand, aluminum oxide, steel grit or shot. Soft abrasives will remove surface impurities without cutting into metal. Hard abrasives will clean and prepare surfaces for any kind of coating.

This unit is designed to be placed on a workbench, connected to a compressed air line and to a 110 V. lighting circuit. It has two lighting fixtures, and an exhaust fan with large dust bag for making the operation dustless. Two armholes with rubber sleeves and gloves permit the operator to handle the work under the blast gun. The cabinet can be operated from a standard 5 H.P. 2-stage garage compressor.

Made by The W. W. Sly Manufacturing Company, 4748 Train Avenue, Cleveland 2, Ohio. Advt.

▲ For more details circle **NED-6413** on enclosed inquiry slip ▲

Your conveyor dollars go farther with LINK-BELT trolleys



LINK-BELT

LINK-BELT COMPANY: Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. 12,395

Write for Folder 2241-B.

▲ For more details circle **NED-6414** on enclosed inquiry slip ▲

POWER RELAYS
SMALL RELAYS
SENSITIVE RELAYS
LATCH RELAYS
INSTRUMENT-CONTROLLED RELAYS and SETS
SEQUENCE RELAYS
TIMING UNITS
SPECIAL-PURPOSE RELAYS

5,348 RELAY TYPES

...mean that you get exactly the right relay for the job!

STRUTHERS-DUNN

Struthers-Dunn, Inc., 150 N. 13th St., Phila. 7, Pa.

BALTIMORE • BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI
CLEVELAND • DALLAS • DETROIT • KANSAS CITY • LOS ANGELES
MINNEAPOLIS • MONTREAL • NEW ORLEANS • NEW YORK • PITTSBURGH
ST. LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • TORONTO

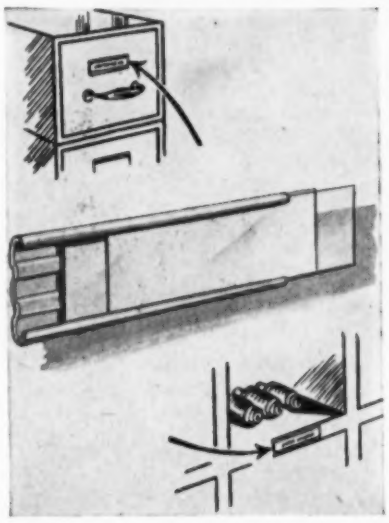
▲ For more details circle **NED-6415** on enclosed inquiry slip ▲

AUTOMATIC VOLTAGE BOOSTER handles motor-starting loads

Applicable to such motor-operated appliances as refrigerators, air conditioners and pumps, as well as other machines in areas where fluctuating low voltages are prevalent, this automatic voltage booster protects motors against burn-out under low-voltage starting loads. When line voltage drops to 105 v or less, the booster is connected into circuit automatically. When line voltage rises to 110 v or more, the booster is disconnected automatically. Unit is portable, plugs into line easily and can be used for any number of machines. Made by **Sola Electric Co.**, Dept. 39-Y, 4633 W. Sixteenth St., Chicago 50, Ill.

▲ For more details circle **NED-6416** on enclosed inquiry slip ▲

PLASTIC LABEL HOLDERS attach to bins, shelves, cabinets



Fireproof and durable, these Aico neutral-ivory plastic label holders are designed for easy attachment to bins, shelves, cabinets, counters, and showcases. They can be quickly affixed to almost any type surface with cement, tacks, screws or staples. Available sizes range from ½ x 2 in. to 1½ x 5 in., while special sizes can be made to order. Holders are packaged in boxes of 10 complete with perforated paper inserts and clear acetate faces ready to slide into place. Made by **Aigner Index Co.**, 97 Reade St., New York 13, N. Y.

▲ For more details circle **NED-6417** on enclosed inquiry slip ▲

DO YOU KNOW? Visual instruction regarding uses, application procedures, inspection and quality control of solderless terminals for stranded or solid wire is provided by two 16-mm sound-color motion pictures. One demonstrates use and application of solderless terminals with hand tools, and the other shows how continuous strips of solderless terminals can be applied at speeds up to 4000 per hour with automatic machines. For free showings, write to Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg, Pa.

▲ For more details circle **NED-6418** on enclosed inquiry slip ▲

When You Buy a BURGESS-MANNING *Acousti-Booth*

You Buy a 50%* Reduction in Noise

When you invest in a Burgess-Manning Acousti-Booth you are purchasing better communications for your office or plant. Good hearing means fewer errors . . . more work accomplished.

Burgess-Manning booths are pleasing in appearance . . . easy to clean and maintain.

Model 601 Wall Booth of wood construction.

Write for Bulletin A107

Model 210 Floor Booth of wood construction.

* *Results of studies by a prominent research organization.*

BURGESS-MANNING COMPANY
Architectural Products Division
5970-C Northwest Highway, Chicago 31, Illinois

▲ For more details circle **NED-6419** on enclosed inquiry slip ▲

EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES	SCAFFOLDING
FABRICATION SUPPORTS	CONVEYOR SUPPORTS
LAYOUT WORK	MAINTENANCE WORK
BENCHES	And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

Send today for BULLETIN No. 500 covering BRUSCO Boxes and Hoppers.

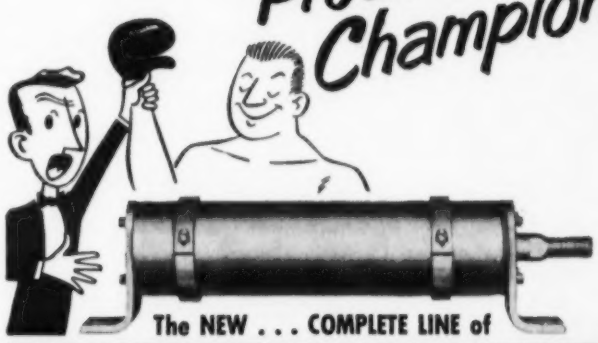
Brusco HANDLING EQUIPMENT

BRUMMELER STEEL PRODUCTS CORPORATION

1411 Ionia Ave., S. W. Grand Rapids, Michigan

▲ For more details circle **NED-6420** on enclosed inquiry slip ▲

Introducing a New Winner... and "Production" Champion



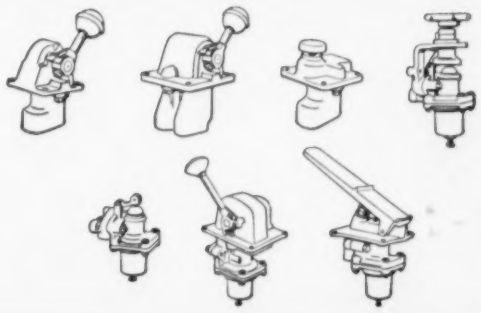
The NEW . . . COMPLETE LINE of

Westinghouse Cushioned Pneumatic Cylinders

8 PRODUCTION BOOSTING FEATURES

1. Diameters: 1½" to 8" . . . any required stroke
2. Cushioned Adjustable Stroke
3. Flange, Foot, Swivel, or Trunnion Mounting
4. Pressure Type End Seals Against Leakage
5. Rotating Heads for Easy Installation
6. Solid Construction—No Stay Bolt Stretch
7. Stock Heads, Rods and Barrels Assemble to Meet Requirements
8. Packing Cups of Famous "WABCO"® Composition

. . . and a complete range of modern pneumatic controls



WESTINGHOUSE
AIR BRAKE COMPANY
WILMERDING, PENNA.
INDUSTRIAL PRODUCTS DIVISION

Factory Branch: EMERYVILLE, CALIF. Distributors throughout the United States . . . Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

▲ For more details circle **NED-6421** on enclosed inquiry slip ▲

BLACK DIAMOND
PRECISION DRILL GRINDER
FOR SHARPENING—ALL SMALL DRILLS
CUTS DRILLING COSTS, DRILL BREAKAGE AND WORK REJECTS 50% AND MORE; CONSERVES SKILLED LABOR

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are tremendously reduced.

Anyone can operate a Black Diamond, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, always ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ For more details circle NED-6422 on enclosed inquiry slip ▲

New **THERMALINK**
Automatic Electric
OIL PRE-HEATING UNITS

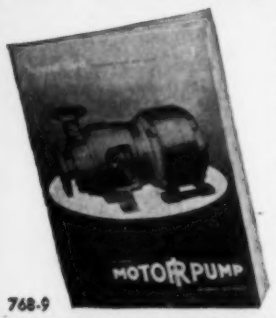
★ Integral adjustable thermostat eliminates wiring problems.
★ Adjustable temperature dial marked in degrees.
★ Available with both thermostat and motor control built into unit.
★ No relays or auxiliary controls needed.
★ Available with pipe-thread or flange header.
★ Wattages from 1000 through 7500.
★ Conservative watt-densities prolong life, minimize carbonization.

WRITE DEPT. N FOR DATA SHEETS PRS-152 & FRS-152

ELECTRO-THERM INC. • SILVER SPRING, MD.

▲ For more details circle NED-6423 on enclosed inquiry slip ▲

get this
. . . information on how to use a SMALLER pump for your jobs!



In this booklet are facts that prove you can use a *smaller* Ingersoll-Rand Motorpump to meet the same industrial pumping requirements as ordinary pumps of *larger* hp! This means you save on first cost . . . also on space, weight and power consumption. It's being done in other plants right now . . . find how you can do it, too.

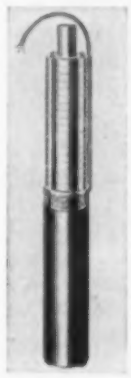
768-9

CLIP AND MAIL, NOW

INGERSOLL-RAND CO., 11 Broadway, New York 4, N. Y.
Please send me, at no obligation, Booklet 7093-C on the complete line of I-R Motorpumps.
NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____
(Please Print)

▲ For more details circle NED-6424 on enclosed inquiry slip ▲

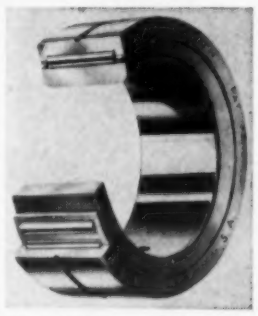
SUBMERSIBLE WATER PUMP is ready-to-install packaged unit



Easy installation is feature of model B ¾-horsepower 4-in. electric submersible pump developed for water supply systems. Pump is furnished as ready-to-install packaged unit complete with heavy-duty rubber jacketed cable and motor control box with built-in motor protective device. Installation is accomplished by lowering pump and motor unit into well having diameter as small as 4 in., mounting control box and connecting piping and wiring. Operation is noiseless since unit operates under water. Capacities range from 520 gph at 150 ft total head to 100 gph at 320 ft. Pump has all bronze and stainless steel corrosion-resistant construction, and motor is water-filled to eliminate sealing problems. Made by **Sumo Pumps, Inc.,** Dept. 38, 375 Fairfield Ave., Stamford, Conn.

▲ For more details circle NED-6425 on enclosed inquiry slip ▲

ALIGNED BEARING will not cock or skew in use



Combining the features of needle, journal and cylindrical roller bearings, the Pitchlign bearing has rollers that will not cock or skew. They are kept in perfect alignment by cage contact at their pitch line, thus reducing stress and tangential forces to a minimum. Bearings can be mounted horizontally or vertically and can be used on high speed shafts. Made by **Roller Bearing Co. of America,** Whitehead Rd., Trenton 3, N. J.

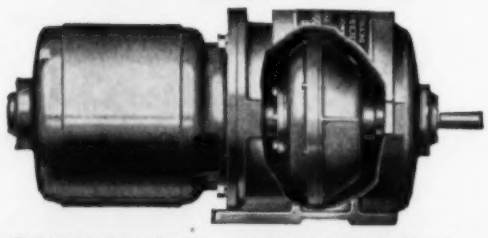
▲ For more details circle NED-6426 on enclosed inquiry slip ▲

SMALL SIZE CAPACITORS have drawn-oval containers

Fixed paper dielectric capacitors are 20 to 30 per cent smaller in size than G-E standard commercial types although basic construction is essentially the same. Units are mechanically stronger, however, because of drawn-oval construction of the container which has single seam hermetically sealed by double-rolling. Ratings of the units are 2.0 to 10.0 microfarads, 600 to 1500 v dc and 330 to 660 v ac. Made by **General Electric Co.,** Capacitor Dept., Schenectady 5, N. Y.

▲ For more details circle NED-6427 on enclosed inquiry slip ▲

American Blower TM Type GYROL FLUID DRIVES



OPERATING ADVANTAGES:

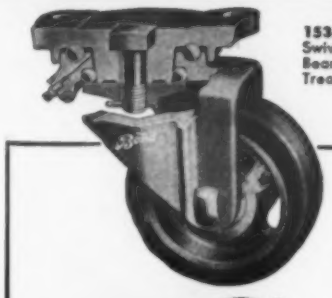
- Provide benefits of smoother acceleration, overload protection, shock absorption.
- Patented "Load Ring," plus clearly indexed degrees of oil filling, provides matched overload protection and most efficient full-load operating characteristics.
- Provide smooth flow of power when used alone or with a standard geared speed reducer.

Free trial units are available to original equipment manufacturers.

AMERICAN BLOWER
American Blower Corporation, Detroit 32, Michigan
Division of American Radiator & Standard Sanitary Corporation

Serving home and industry: AMERICAN-STANDARD • AMERICAN BLOWER • ACME CABINETS CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

▲ For more details circle NED-6428 on enclosed inquiry slip ▲



1536A Series—Double Ball Race Swivel Caster equipped with Roller Bearing Vulcanized-on Soft Rubber Tread Wheels.

Bond® built-for-the-job **CASTERS**
insure
- Increased plant efficiency
- Faster materials handling
- Lower production costs

1A Series—Stationary Caster equipped with Plain Bearing Semi-Steel Wheel.

SELECT any of the more than 25 different types of Bond industrial casters for your materials handling jobs and *know* that these efficient, sturdy and economical casters will roll-up greater production profits every time.

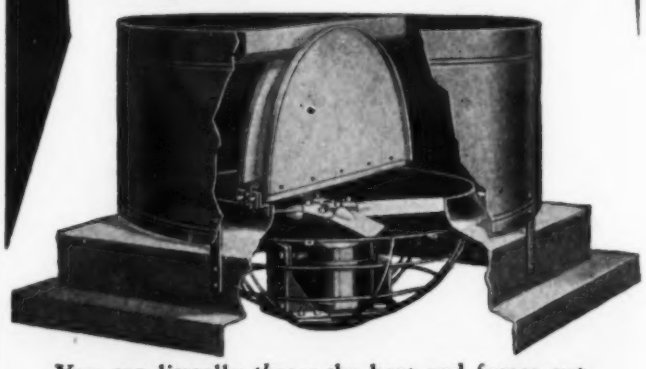
For the complete facts on all Bond Truck Casters write for your copy of Catalog K-38.

BOND FOUNDRY & MACHINE CO.
Manheim, Penna.

▲ For more details circle NED-6429 on enclosed inquiry slip ▲

To help you solve industrial Ventilation Problems efficiently, economically—the Swartwout

Whirlout...
"straight-through" powered ventilator



You can literally *throw* the heat and fumes out of factory workrooms with this newest "straight-through" roof ventilator. Whirlout is a simple, sturdy unit of the type that has been growing in popularity for several years.

For many situations where fast powerful exhaust is desired above furnaces, ovens, pickling vats, or *any* operation that creates heat, smoke or fumes, Whirlout does it in a hurry. The circular body forms a chute directing the airflow straight up, to be dispersed by air currents. There's practically no air friction created except by the center dampers, which are necessary to make the ventilator weather proof when not operating. (Weather is kept out by the blast of air when fan is operating.)

Whirlout is powered by an efficient ball bearing motor driving an airplane type propeller with square-tipped blades. The air-stream is guided by a streamlined throat directly above the fan. Ten sizes, with a wide selection of cfm capacities, are available. It's worthwhile investigating Whirlout for your tough ventilating jobs. Write for full description—Bulletin 346.

The **Swartwout Co.**
18511 Euclid Avenue • Cleveland 12, Ohio
Industrial Ventilation Specialists Since 1904

▲ For more details circle NED-6430 on enclosed inquiry slip ▲

HORIZONTAL POWER . . .

. . . where Belt Surface Conveyors can't stand abuse of heavy metals, sharp corners or rough edges, Metzgar "Live Roller" units provide an all-metal, powered bearing surface. May be used as power booster in gravity line. Work can be slowed or held without stopping machine.

4 STOCK SIZES
11½" - 15"
18" - 24"
WIDTHS

Furnished portable or permanent mounted. Choice of one to five rollers per foot. Lengths to suit. Ball bearing throughout. Gearmotor AC or DC drive.

ASK FOR FOLDER NO. 1249

METZGAR CO.

MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES • REEL DOLLIES & END-WOOD WHEELS.

416 Douglas N.W.

GRAND RAPIDS 4, MICH.

For more details circle NED-6431 on enclosed inquiry slip

6 GOOD REASONS FOR CHOOSING. . .

LOVEJOY UNIVERSAL JOINTS

★ Concentricity guaranteed to .001.
★ Rivets ground flush with body for close quarter work.
★ Greater angle of operation with maximum bearing surface and strength.
★ No binding, backlash or inplay of pins.
★ Highest grade, heat-treated alloy steel.
★ Exceed Armed Forces rigid requirements.

Available in 13 sizes. Diameters ½" to 4". Lengths 2" to 10⅝".

WRITE FOR CATALOG TODAY

LOVEJOY FLEXIBLE COUPLING CO.

5003 W. Lake Street, Chicago 44, Illinois

Also Mfrs. Lovejoy Flexible Couplings and Lovejoy Variable Speed Transmissions

For more details circle NED-6432 on enclosed inquiry slip

Modern way to save money . . . Farquhar medium duty PACKAGE CONVEYOR

Cuts COSTS Boosts PROFITS

IF you're looking for an easier, faster, *cheaper* way to move bags, bales, boxes, cartons and bundles up to 75 pounds, get this Farquhar Model 436 Package Conveyor on the job and watch your handling costs hit rock bottom!

The Farquhar Model 436 is especially designed for all types of portable or semi-permanent materials handling installations. Heavy, two-ply rubber covered belt is 12" wide, carries units up to 75 pounds at standard speed of 78 feet per minute. Belt is supplied with or without cleats. Standard center support provides great stability, may be attached to floor or hung from ceiling. Minimum length 14 ft., maximum 32 ft.

For information on this money-saving Farquhar Model 436 Conveyor — or other Farquhar Conveyors for *all* bulk and packaged materials handling—write to:

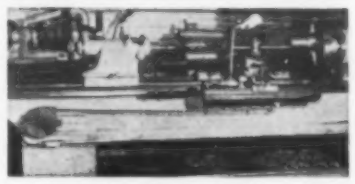
A. B. FARQUHAR COMPANY, *Conveyor Dept. U-04*, 142 N. Duke St., York, Pa., or 618 W. Elm St., Chicago 10, Ill.

Farquhar CONVEYORS SAVE YOU MONEY

A. B. FARQUHAR COMPANY Division of THE OLIVER CORPORATION

For more details circle NED-6433 on enclosed inquiry slip

EXTENSION CORD REEL used for light on lathe



Illumination is available at all times on the slide of this lathe when a series 700 electric extension cord reel is used. Machine operator has both hands free to perform and check his work, as the reel takes up the slack in the cord when the slide is moved, yet keeps it connected at all times. In this installation, a transformer is used to provide 110-v current and an adjustable light is secured to the slide. Reels are available with and without transformer and light. Made by **Benjamin Reel Products, Inc.**, 10704 Broadway, Cleveland 25, O.

For more details circle NED-6434 on enclosed inquiry slip

NAMEPLATES have metal plate and wood frame

Available with easel back for desks and counters or flat back for doors and walls, this raised letter nameplate measures 2 x 8 in. and has 21 spaces for lettering, punctuation and spacing. Name portion is solid metal with bright letters and black background. Frame is solid blond or mahogany wood. Price is $4.95. Made by **Modern Sales Co.**, 210B Fifth Ave., New York 10, N. Y.

For more details circle NED-6435 on enclosed inquiry slip

DISK SANDER & GRINDER for wood or metalworking operations

Fine, accurate sanding jobs as done in woodworking shops or grinding jobs in tool and die, production machine or sheet metal shops; aircraft plants; or foundries are possible with the Max 20-in. disk sander and grinder. Angle gage allows grinding any simple or compound angle from 45 degrees up to 45 degrees down. Large protractor provides fine adjustments. For large surfaces, table lowers to clear disk and tilts 45 degrees up or down. Finger-tip adjustable stop returns table to right angle instantly. Cast aluminum alloy disk is anchored with studs from hub side to eliminate holes in abrasive cloth or paper. Motors of ¾, 1, 1½ or 2 hp with speeds to 1140 rpm are optional. Made by **Max Mfg. Co.**, 138 Stockton Ave., San Jose 26, Calif.

For more details circle NED-6436 on enclosed inquiry slip

KLEMP Floorsteel "PATHS" make materials handling EASIER!

Roll flexible Floorsteel out like a rug over your present floor . . . fill its rugged steel grid with concrete or mastic . . . and you have a solid, level, enduring "path" that the heaviest loads roll over, *easier*. Cracks, ruts and potholes will never snag your truck wheels again! Floorsteel stays smooth, quiet and non-skid, for loads rest on its exposed steel edges—not on the concrete. Easy to lay, maintenance-free. Send for our informative, illustrated bulletin *today!*

Ask about Klemp Hexteel heavy-duty surface armor.

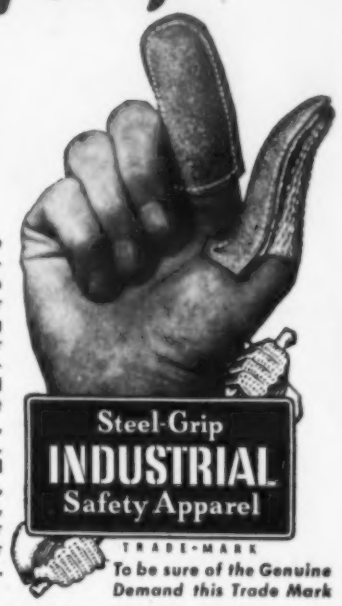
KLEMP METAL GRATING CORP.

Steel Flooring Specialists

6611 SO. MELVINA AVENUE • CHICAGO 38, ILLINOIS

For more details circle NED-6437 on enclosed inquiry slip

Save Fingers



With Steel-Grip Open End Finger Guards

Hundreds of factories save time and injuries and speed production by protecting workers with Steel-Grip Open End Finger Guards. Used for handling rough or sharp articles, for buffing, grinding, sanding, polishing, punch press work and hundreds of other jobs. Protect fingers or thumb, front or back, from cuts, abrasions or blisters. Various designs made in several leathers, and other materials, with elastic web back for snug, cool, comfortable fit. Sizes for men and women. Send 10c for sample. (U.S. PATENTS NO. 2,351,906—NO. 2,461,872)

Steel-Grip INDUSTRIAL Safety Apparel

TRADE-MARK

To be sure of the Genuine Demand this Trade Mark

Catalog of Industrial Safety Apparel free on request

INDUSTRIAL GLOVES COMPANY
A CORPORATION
1520 Garfield St., Danville, Illinois
IN CANADA: SAFETY SUPPLY CO., TORONTO
Famous Industrial Safeguards Since 1910

For more details circle NED-6438 on enclosed inquiry slip

ENGRAVE

PANELS OF ANY DIMENSIONS IN YOUR OWN SHOP WITH THE Engravograph

Portable Model I-S

The only portable machine which reproduces 15 sizes from one master alphabet.

The only one with adjustable copy holding slides for multiline engraving in one set-up.

Self-centering holding vise for nameplates.

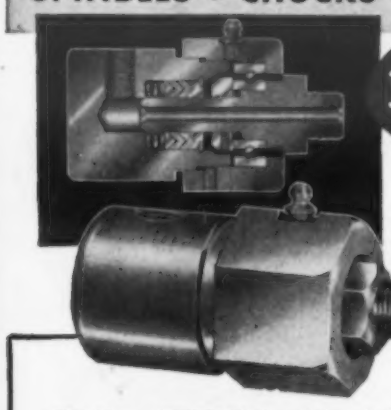
Send for Booklets

I-S—26 portable model • H—26 heavy duty model

NEW HERMES, Inc. 13-19 University Place, N.Y. 3
In Canada: 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

For more details circle NED-6439 on enclosed inquiry slip

For High Speed Rotating Connections on
SPINDLES • CHUCKS • CLUTCHES



BARCO

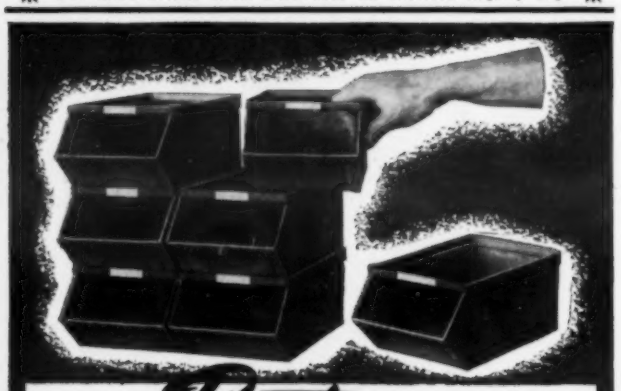
TYPE V REVOLVING JOINTS

Use Barco TYPE V Revolving Joints wherever you need high speed, low torque, leakproof rotary connections for air or hydraulic lines on machine tools.

- **LIGHT RUNNING!** Ball bearing design handles both radial and light end thrust with low torque and minimum wear.
- **LEAKPROOF!** Thanks to Barco's exclusive "CTR" V-ring type seal.
- **PRECISION-BUILT!** All parts machined to close tolerances. Parts interchangeable and renewable.
- **COMPACT, DURABLE!** Easy to install where space is limited. Withstands rugged service.
- **WIDE SPEED RANGE!** Up to 2500 RPM on light pressure applications. Lower speeds for high temperatures and pressures. *Send for Catalog 300.*

BARCO MANUFACTURING COMPANY
1830H Winnemac Ave. • Chicago 40, Illinois

For more details circle NED-6440 on enclosed inquiry slip



Parts...

★ **Where You Want Them . . .**
★ **When You Want Them**

You'll save time, space and labor handling parts and material when you use these patented STACKBINS. STACKBINS keep parts instantly accessible—eliminate waste hand motions—stack compactly to form units of exactly the right shape and capacity—make order filling or assembly work faster, easier, more efficient. Heavy steel, all-welded construction. Sizes from 3½" x 6" x 3¼" to 15" x 24" x 11".

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

For more details circle NED-6441 on enclosed inquiry slip

Now Spray On design layout ink

"JUST PRESS THE BUTTON ON THE CAN"

Faster! Easier!

No brush, no waste, no mess! Self-pressurized can sprays on CROWN Design Layout Ink in fine mist that dries to hard surface in a minute. Dark blue is standard—other colors on volume purchases.

ORDER TODAY!
$1.59 PER 12-OZ. CAN
15% discount in cases of 12
Additional discount for larger quantities
FOB Sycamore, Illinois

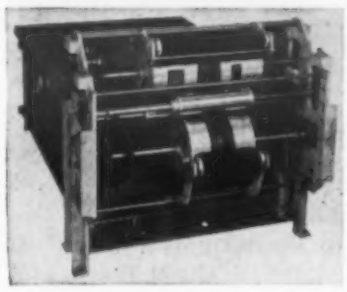
CROWN INDUSTRIAL PRODUCTS CO.
406 Borden Ave., Sycamore, Illinois

Please ship at once
_____(how many?) cans
_____(how many?) cases
CROWN Design Layout Ink

Name_____
Company_____
Our Purchase Order No._____
Address_____
City_____Zone____State_____

For more details circle NED-6442 on enclosed inquiry slip

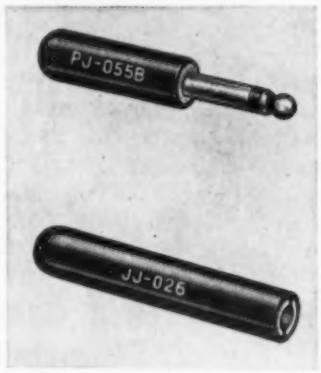
BOX PRINTING MACHINE prints all sides at one time



Knocked down corrugated boxes can be imprinted on all sides in one operation by Auto-Printer machine. Operating at speed of 1500 cases per hour, it uses quickly interchangeable rubber type or mats and quick-drying, noncaking ink. Type and roller need no cleaning after use. Side rails are adjustable for different sized containers and spring loaded pressure rollers compensate for container thickness. An indexing arm centers the impression. Made by **Industrial Marking Equipment Co.,** Dept. NED, 454 Baltic St., Brooklyn 17, N. Y.

For more details circle NED-6443 on enclosed inquiry slip

PLUG & EXTENSION JACK meet military specifications



Designed for use in communication and industrial equipment, Littel Plug and Extension Jax conform in material and finishes to specifications JAN-J-641 and JAN-P-642. No. 440 plug features one-piece tip rod which, with sleeve, is assembled into mold as an insert, providing a finished plug with complete continuity of thermoplastic insulation between tip rod and plug sleeve. Plug is two-conductor type with ¼-in. diameter sleeve, and mates with JAN type JJ-034 standard jacks. It has two tinned screw terminals. No. 820 Jack features spring tempered nickel silver springs assembled into stack assembly insulated by phenolic spacers and tubing, and is assembled to long brass body by stainless screws. It mates with plug types PJ-054 and J-540. Made by **Switchcraft, Inc.,** 1330 N. Halsted St., Chicago 22, Ill.

For more details circle NED-6444 on enclosed inquiry slip

DO YOU KNOW? It's possible to learn all the why's and wherefore's of pumps by mail with a new course. Two new instruction texts have been prepared, and they deal with direct-acting reciprocating pumps of all types, and constant and variable stroke power pumps as well as centrifugal, jet, rotary, propeller and displacement types. Included are sections devoted to selection, installation, operation, maintenance and management of pumps. Course is offered under selective plan for group instruction, if desired. Write to International Correspondence Schools, Dept. NED, Scranton, Pa.

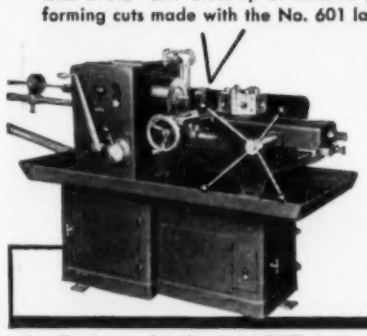
For more details circle NED-6445 on enclosed inquiry slip

HEAVY CUTS

OSTER

No. 601 "RAPIDUCTION" the SIMPLIFIED LATHE

View shows this lathe removing a .007" chip on S.A.E. 1335 steel with a 3⅛" cut. Close-up of finished part is example of heavy forming cuts made with the No. 601 lathe. *It's EASY to operate!*

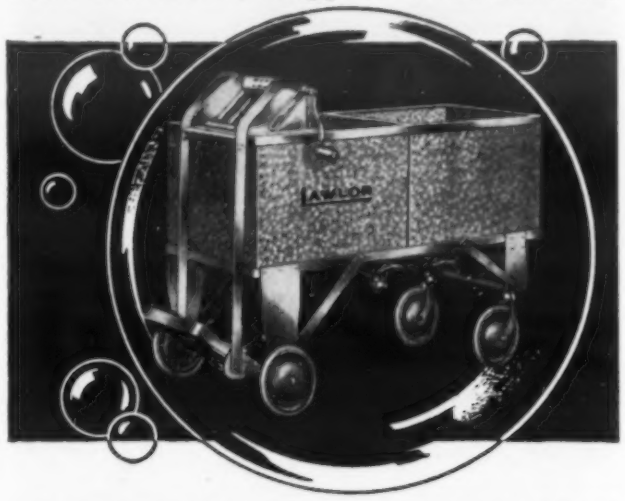


Capacity: 1½" round bar. Optional features include WORM drive or DIRECT drive: 2-speed or 4-speed motor; other optional features. Write for Bulletin No. 601.

THE OSTER MFG. CO.
2066 EAST 61st STREET
CLEVELAND 3, OHIO

For more details circle NED-6446 on enclosed inquiry slip

LAWLOR MOPPING TANKS
Lead the Field in Ruggedness and Service

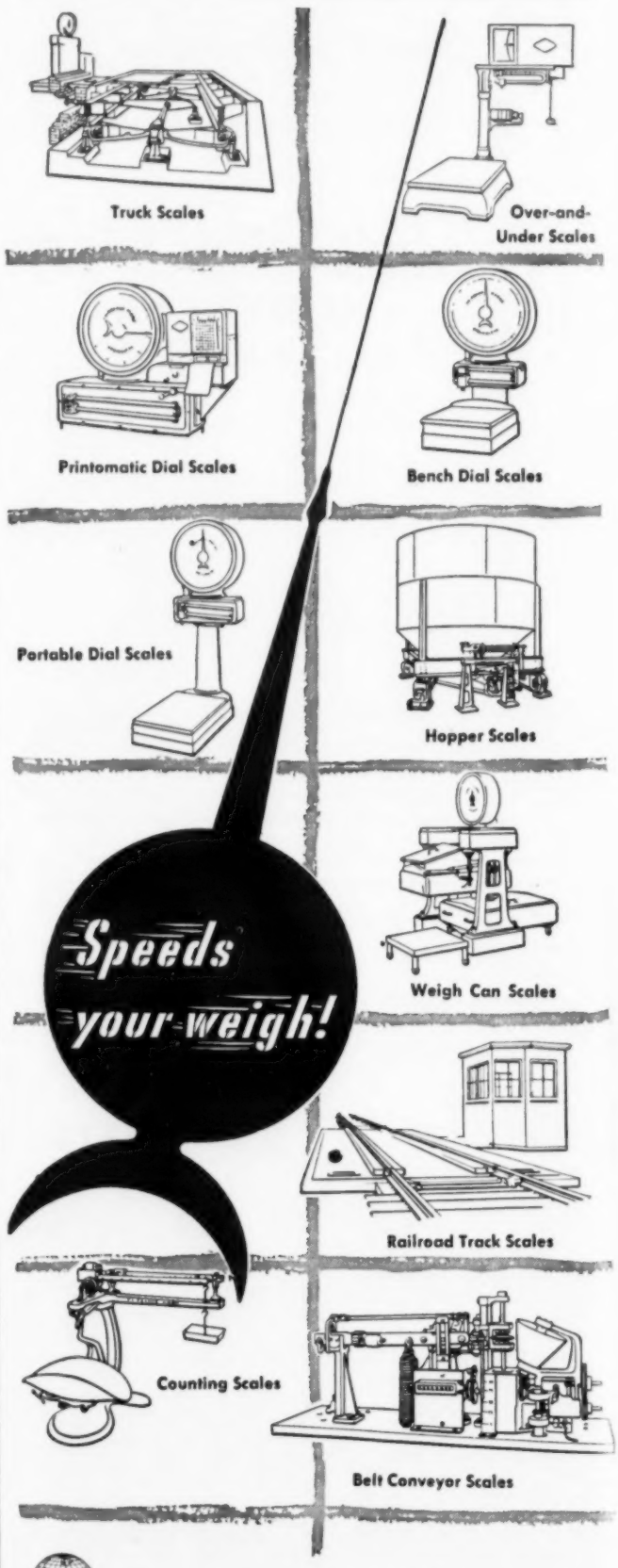


8 styles and sizes of all steel, acetylene welded tanks • 2 or 3 compartments • 30, 60 or 65 gallon capacities • hand or foot pressure wringers • perforated roll wringers • special drain shut-offs • hot dipped, galvanized chassis and frames • rubber tired, cadmium plated steel wheels.

Write for Catalog of Mopping Tanks, Wringers, Floor Scrub Wax-Polishing Machines for every kind and size floor.

S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
131 N. Aberdeen St., Chicago 7, Ill.

For more details circle NED-6447 on enclosed inquiry slip



FAIRBANKS-MORSE,
a name worth remembering

SCALES • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS
HOME WATER SERVICE EQUIPMENT • RAIL CARS • FARM MACHINERY • MAGNETOS

For more details circle NED-6448 on enclosed inquiry slip

New XL BOND

FOR CARBIDE TOOL AND CUTTER

GRINDING

"XL" is Chicago Wheel's exclusive new bond for silicon carbide vitrified grinding wheels, especially made for grinding carbide cutting tools. Ideal for rough and finish grinding! . . . offhand or precision automatic. Supplied in most popular sizes and steel backs. Prompt delivery. Keep your production up . . . costs down, with "XL."

Write today for information—Dept. NED

CHICAGO WHEEL & Mfg. Co.
1101 West Monroe St., Chicago 7, Illinois
OFFICES IN PRINCIPAL INDUSTRIAL CENTERS

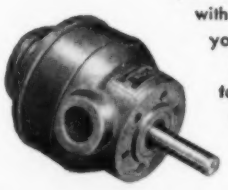
For more details circle NED-6449 on enclosed inquiry slip

STOP THE PRESSES*!

... and install GEROTOR

hydraulic pumps for improved performance

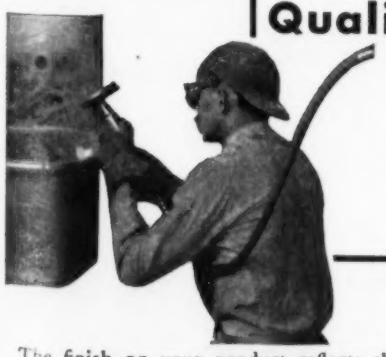
* Punch presses . . . baling presses . . . straightening presses . . . piercing presses . . . assembly presses . . . plastic presses . . . any hydraulically operated presses work better with GEROTOR Hydraulic Pumps. Whether you build them or maintain them, specify GEROTOR Pumps . . . for pressures up to 1200 p.s.i. continuous, 1500 intermittent . . . deliveries from .4 to 40 g.p.m.



GEROTOR MAY CORPORATION
P.O. Box 86, Baltimore 3, Md.

For more details circle NED-6450 on enclosed inquiry slip

Quality starts with a Superior Finish



The finish on your product reflects the craftsmanship, the quality of that item. That's why so many metal fabricators specify Haskins Flexible Shaft Machines for all their polishing, sanding, grinding, buffing, and filing operations. Like this manufacturer of stainless steel sinks, they have found that Haskins power and the right attachment provide precision operation that assures quality production.

Because you handle only a light handpiece—not a heavy motor—you find that operator fatigue is reduced, production goes up. And multi-speed power allows selection of the right speed for varied operations.

You'll find the right combination of power, speed and attachments for your specific application in the complete Haskins line. Write today and ask for our recommendation on your grinding, sanding, filing or polishing job—no obligation, of course, R. G. Haskins Co., 603 Washtenaw Ave., Chicago 12, Ill.

haskins
FLEXIBLE SHAFT EQUIPMENT

Your choice of mounting: Bench, Pedestal or Suspended

For more details circle NED-6451 on enclosed inquiry slip

NUCLEAR RECORDER for monitoring or process control

Model RT Ohmart cell, which converts radioactive energy directly into electrical energy, is incorporated into high impedance current recorder for continuous monitoring of ambient radiation and for following continuous processes where gamma ray activity is present. When connected to the recorder, a permanent record of production is made which shows number of doses prepared and amount of activity in each. Cell can also be with standard instruments of type used for pH measurement. Signal contacts can be included to sound high or low alarms or pneumatic or electric switches can be employed for automatic process control. Made by **Ohmart Corp.**, 2349 Ferguson Rd., Cincinnati 38, O.

For more details circle NED-6452 on enclosed inquiry slip

TRANSFORMERS distribution type weigh less

Redesign of GE distribution transformer has effected a weight savings of about 10 per cent, the fourth such reduction since 1937. Pole type units range from 5000 v to the lower voltages and incorporate core steel and processing methods improvements. Weight reduction eases installation. In addition to stronger construction, transformer offers lower impedances and improved regulations. Short-circuit strength is increased. Units are available in rating of 50 kva and less, with others to be added. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle NED-6453 on enclosed inquiry slip

DO YOU KNOW? When a watchman carries a Chicago Watchclock on his rounds and checks in at each fixed station box, a permanent record of his performance is provided. These records entitle users to reduce insurance rates. To get the full story, write Chicago Watchclock, 1522 S. Wabash Ave., Chicago 5, Ill.

For more details circle NED-6454 on enclosed inquiry slip

The Revolutionary NEW GRIP-STRUT Safety GRATING

gives MAXIMUM STRENGTH with MINIMUM WEIGHT

NOT welded. Vertical members joined by integral saddles to form a positive NON-SKID surface under *all* conditions. In one single unit, GRIP-STRUT Safety Grating combines great strength with light weight, its side channel members greatly reduce cost of construction and simplify installation. Easy to maintain and clean. Replaces old or obsolete types of grating. Grip-Strut has a lower cost factor than any other type of grating. Available in steel or aluminum.

GLOBE GRIP-STRUT **GRIP-STRUT division**
THE GLOBE COMPANY
4002 S. Princeton Ave. Chicago 9, Illinois

For more details circle NED-6455 on enclosed inquiry slip

"GO AMERICAN" FOR CIRCULAR WELDED PRODUCTS

Can your product be redesigned to take advantage of the tremendous savings offered by welding?

Our engineers and metallurgists will gladly give you the benefit of their experience. We invite your inquiry, it will receive prompt attention without obligation.

SEND FOR YOUR COPY OF OUR 20 PAGE ILLUSTRATED CATALOG

THE AMERICAN WELDING & MANUFACTURING CO.
WARREN, OHIO

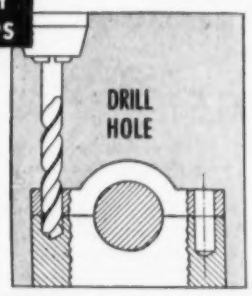
For more details circle NED-6456 on enclosed inquiry slip

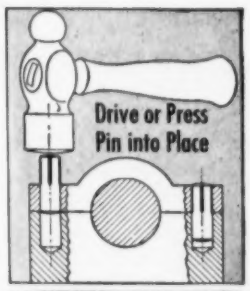
Quick way to cut costs...

DRIV-LOK PINS

- Simple installation . . . Drill Hole—Drive or Press Pin into Place
- Positive Anchorage—Vibration and Shock-proof
- Low Initial, Installation Cost
- Wide Selection of Materials

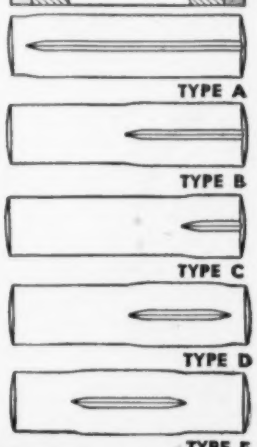
2 EASY STEPS





DRIV-LOK Type "E" Pins—with grooved section in the middle, equidistant from the ends—are widely used as pivot or hinge pins because they provide maximum free rotation of the parts while remaining firmly anchored in the middle.

This is one of thousands of applications of various DRIV-LOK Pins effecting great economies in the mass production industries. DRIV-LOK Pins can save you money by speeding and simplifying your fastening problems. Write for Catalog and samples, giving the nature of your fastening problems.



DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Ill.

For more details circle NED-6457 on enclosed inquiry slip

LARGE OR SMALL
SHORT OR TALL

Electroline Fittings

ARE THE CHOICE OF ALL

There's an Electroline Wire Rope Fitting to suit your every need. Actual tests have proved their great holding power in all applications, regardless of size or type.

Electroline Fittings are installed easily and safely with ordinary tools—by unskilled labor in a matter of minutes—without the danger of molten metal or acids—without blow torches or special tools.

To give you the whole story of Electroline Wire Rope Fittings, we have prepared a pocket-size illustrated catalog, filled with information of sizes and types. Why not send for your copy today?

Electroline COMPANY
4121 SOUTH LA SALLE STREET
CHICAGO 9, ILLINOIS
IN CANADA: POWERLITE DEVICES, LTD., TORONTO

For more details circle NED-6458 on enclosed inquiry slip

Tips on TACHOMETERS

ONLY BIDDLE gives you the NEW JAGABI® with Automatic Protection against Acceleration and Overspeed

New models AO and DO Jagabi Hand Tachometers with "Overspeed Protection" are exclusive with us. A special friction coupling minimizes the harmful effects of occasional overspeeding when accidentally used on a too-low range setting. Direct indicating, rpm shaft or fpm linear and peripheral speeds, and speed variations. 25 to 48,000 rpm ranges. Write today for **BULLETIN 35-01-D**

B 806

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-6459 on enclosed inquiry slip

STAINLESS STEEL ALUMINUM MONEL* INCONEL* BRASS NICKEL* COPPER STEEL

NEED METALS?

Sheet, Plate, Tube, Pipe, Wire, Rod and Bar, Extrusions, Structural Shapes and Industrial Products.
Precision equipment for shearing and slitting
*Not stocked in Kansas City or St. Louis territories.

IN THIS AREA?

THEN CALL:
METAL GOODS CORPORATION
5239 Brown Avenue
St. Louis 15, Missouri
Telephone: GOodfellow 1234
or consult classified section of your telephone directory if you are in one of the 20 warehouse or sales service cities shown above.

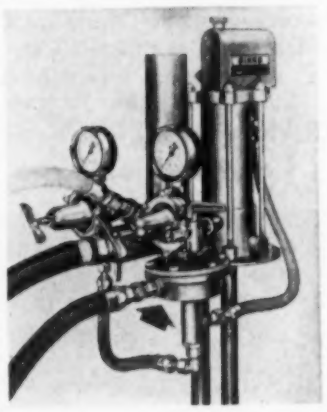
For more details circle NED-6460 on enclosed inquiry slip

POURING SPOUT & TILTER eases pouring of liquids

Safe and easy pouring of liquids into smaller containers is provided by the GS pouring spout and tilter. A chain holds the bottle in position when tilted. All members of steel cradle are riveted or welded. Safety air vent pouring spout fits any size bottle and assures even flow without spurts or splashes. Unit is made of acid resistant rubber and plastic tubing. Complete unit costs $9.95, but components are available separately. Offered by **General Scientific Equipment Co.**, 2701 W. Huntingdon St., Philadelphia 32, Pa.

For more details circle NED-6461 on enclosed inquiry slip

SPRAY PUMP SURGE CONTROL eliminates high pressure build-up



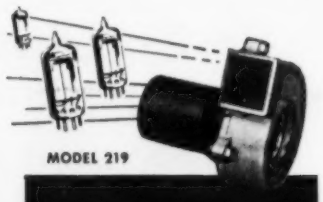
Spray materials can be applied evenly with Binks air-operated material handling pumps now furnished with this surge control. Formerly, when spray gun was shut off, pump continued to operate and build up pressure in hose. This resulted in violent spurts of material being shot out when gun was triggered again. The surge control automatically shuts off pump's supply of compressed air the instant the spray gun is closed and starts it operating again when spray gun is opened. This eliminates pressure build-up and extends life of pump and material hose. Control is available separately for Binks pumps now in use. Made by **Binks Mfg. Co.**, Dept. NED, 3112 Carroll Ave., Chicago 12, Ill.

For more details circle NED-6462 on enclosed inquiry slip

DO YOU KNOW? "Progressive Mechanization" is the title of a visual program aimed at boosting American productivity. This step-by-step approach to the problems of industrial mechanization consists of a 16-mm sound-color motion picture, a manual, and a survey form and check list. Program traces steps in replacement of hand operations by simple machines up through fully automatic continuous-process systems and encourages management to raise its manufacturing operations at least one notch on the scale. This presentation can be purchased at cost or is available for single showings without cost. For full details, contact General Electric Co., Schenectady 5, N. Y.

For more details circle NED-6463 on enclosed inquiry slip

cooling breezes FOR electronic hot spots!



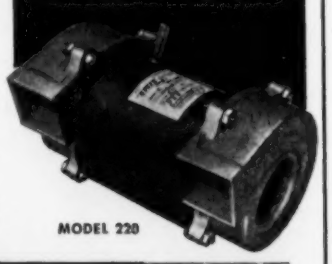
American Electric
Variable Frequency
MOTOR-BLOWERS

Especially designed for spot cooling electronic equipment aboard aircraft. Unique design insures minimum watts loss over full frequency range of 320 to 1000 cycles.

In spite of wide frequency variations, the cfm output remains essentially constant at sea level. As pressure is reduced, the rpm increases, providing additional velocity of cooling air.

TWO BLOWER TYPES: Single or double ended.

AIR DELIVERY: Blower heads available for any direction of air delivery.



Write for literature!

AMERICAN ELECTRIC MOTORS TRADE MARK

For more details circle NED-6464 on enclosed inquiry slip

Switch to PLATECOIL for
(REPLACES PIPE COIL)

TROUBLE-FREE Tank Heating and Cooling

Platecoils have many times the useful life of pipe coils thus preventing many production delays. When repairs are necessary, plates are changed from outside the tank in a matter of minutes without dumping tank solution. You can save STEEL, MAN-HOURS and MONEY by using Platecoils and you will enjoy TROUBLE-FREE heating and cooling.

NEW Technical Manual No. P57 simplifies the solution of heat transfer problems. Send for your copy today.

PLATECOIL Division
KOLD-HOLD MFG. CO.
LANSING 4, MICHIGAN

For more details circle NED-6465 on enclosed inquiry slip

HANDLING "TOUGH" MATERIALS?—

A 60' Carrier Natural-Frequency screening conveyor for clay products, with 24" pan made of ¼" steel plate. Capacity: 100 tons of 100-pound material per hour. 5 H.P. drive. Middle section of screen removed to show supporting bridge.

Close-up of drive—note patented drive linkage which always places weight of vibrating pan and conveyed materials on the spring supports, and never allows these loads to be imposed on the eccentric shaft and bearings.

Handling anything hot, sharp, powdered, oily, abrasive, sticky, granulated or stringy?

Carrier Natural-Frequency Conveyors work on a unique, patented vibrating principle which permits them to handle many materials that are too "tough" for most screw, belt, apron, vibrating and other conventional types of conveyors. These spectacular new conveyors also substitute the natural resonance action of coil springs for brute force. Result—*a tremendous reduction in power . . . far less wear-and-tear . . . and an absolute minimum of maintenance and down-time!*

Carrier Natural-Frequency Conveyors—including vertical vibrating spiral types—are now racking up amazing conveying records for scores of America's biggest, most successful industrials. Let us prove to you that they will move *your* product more quickly, efficiently and economically. *Write for Bulletin 109—no obligation of course!* Carrier Conveyor Corporation, Frankfort Avenue at Clifton, Louisville 6, Kentucky.

CHECK THESE ADVANTAGES!

LESS POWER REQUIRED
(1000 foot-tons per hour per H.P.)

LESS MAINTENANCE & DOWN-TIME
(Less power + good design = good service)

GREATER CAPACITY
(From a dribble up to 200 tons per hour)

HIGH CONVEYING SPEED
(Up to 100 feet per minute, on flat hauls)

NO DAMPENING UNDER LOAD
(Designed with extra power for specified load, with positive stroke)

SELF-CLEANING
(Continuous smooth trough — no pockets)

SCREENS, DEWATERS, SEPARATES, BLENDS, DRIES, COOLS
(Combines processing with conveying)

WIDTHS FROM 6" TO 48"; LENGTHS FROM 5' ON UP
(With pans 16 gauge to ½" plate or heavier, open or enclosed)

BALANCED, VIBRATION-FREE UNITS AVAILABLE
(For use on ceilings or light floor construction)

CARRIER NATURAL-FREQUENCY CONVEYORS

For more details circle NED-6466 on enclosed inquiry slip

THIS IS ONE OF THE TRULY ALL-PURPOSE CHEMICAL HANDLING PUMPS AVAILABLE TO INDUSTRY TODAY

PEERLESS TYPE DS CHEMICAL PROCESS PUMP

PEERLESS PUMPS

Oil-or-grease-lubrication Rugged frame, case and liquid end

Write today for new Peerless Pump Bulletin No. B-1600. Completely describes the Type DS chemical process pump. Profusely illustrated with pump views, cutaway sections, elevations and dimensional data and performance characteristics.

SOME TYPE DS CHARACTERISTICS:
OPEN OR ENCLOSED IMPELLER DESIGN • COMPLETE RANGE OF SIZES 1"-6" • HEADS—UP TO 231 FEET • LIQUID END CAN BE OF ANY ALLOY

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
Los Angeles 31, California and Indianapolis 8, Indiana
Offices: New York, Chicago, St. Louis, Atlanta; Dallas, Plainview and Lubbock, Texas; Fresno, Los Angeles; Phoenix; Albuquerque, N. M.; Tulsa

For more details circle NED-6467 on enclosed inquiry slip

Tiny parts for the DC-6 get THOROUGH check-up with FLASH-O-LENS

Small parts for the hydraulic system of the famous Douglas DC-6 are inspected for symmetry with FLASH-O-LENS—the handy device that *lights* the work and *magnifies* it.

It will pay *you* to put FLASH-O-LENS to work on your inspection jobs. Built-in bulb throws light *only* on field of vision—*not* in worker's eyes. Accurately ground lens gives sharply detailed enlargement.

Write for free descriptive literature on battery-operated and plug-in types.

E. W. PIKE & COMPANY
492 NORTH AVE. ELIZABETH, N. J.

For more details circle NED-6468 on enclosed inquiry slip

LOW PRESSURE RELIEF VALVE

Positive Control at 7-10 p.s.i.

Protect storage and shipping containers from excessive pressures with the new ANDAL type C-13 valve. It provides accurate control of gases and vapors at pre-set range of 7 to 10 p.s.i. Valve features compact design, sturdy construction, non-corrosive parts, standard pipe thread fittings. Meets government salt spray tests. Four sizes available with various types of mountings and constructions. ANDAL is a manufacturer of low-pressure relief valves for prime contractors of defense items.

763-AA-V Write today for Data Sheet No. C-13

ANDREWS-ALDERFER COMPANY
1102 HOME AVE. • AKRON 10, OHIO

For more details circle NED-6469 on enclosed inquiry slip

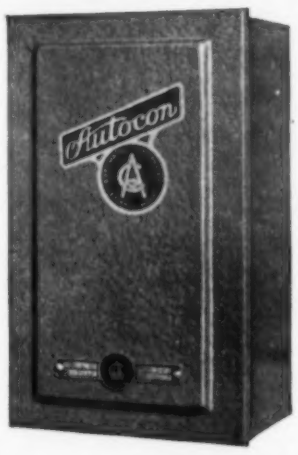
CARTON LIFT ATTACHMENT
lifts cartons without pallets

Handling of heavy cartons without pallets is function of the Carton Lift attachment which is quickly interchangeable with standard forks. Two cartons are lifted at one time by placing lift in contact with bottom carton and raising the carriage. This moves spade-like arms up and under interlocking cover flange, assuring maximum load stability for any handling operation. Arms adjust laterally to handle cartons of varying widths. Lift was originally designed to handle appliances packed in stitched, flanged containers, but has many possibilities in other lifting applications. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

For more details circle NED-6470 on enclosed inquiry slip

ALTERNATORS
for pumps, compressors and burners

Starting sequence of any two pumps, compressors, blowers, burners or other units controlled by magnetic starters or two-wire circuits is automatically transposed by these Autocon alternators. Pilot devices can be float, pressure, or thermal switches, or other two-wire controls. Another feature is locked-in standby protection against failure of operating equipment, failure of pilot device or failure of alternator itself. Installation is quick and easy by connecting pilot devices to clearly numbered terminals. Convenient knock-outs and conduits provide ready access to all terminals. Made by **Automatic Control Co.**, 1009 University Ave., St. Paul 4, Minn.



For more details circle NED-6471 on enclosed inquiry slip

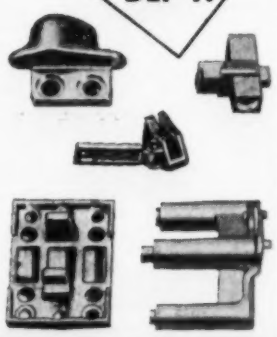
DO YOU KNOW? New techniques have been developed which will drastically reduce current costs of metals production. The processes involved the treatment of ore concentrates by chemical methods to produce pure metals. Chemico's reduction process will be employed in several metals refining plants to produce cobalt, copper, manganese and nickel concentrates and powdered metals. Developed by Chemico, a unit of American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.

For more details circle NED-6472 on enclosed inquiry slip

Small Metal Parts Now Die-Cast Automatically in DOLLIN'S SMALL CASTINGS DEP'T.

SMALL Zinc Die Castings 1000 per lb. to 3 per lb.*

SAVE by eliminating machining and assembly operations—or by paying less per piece. Our specialized equipment combines the design latitude of die-casting with the speed of fully automatic processes! Check with us on consolidating simple parts, or on cutting costs of any of your small parts requirements. Parts are delivered completely trimmed- and, when desired, ready for use.



Write for NEW Bulletin and Samples. Or Send Prints for Quotation.

*Approx. range for Small Castings Dep't.

DOLLIN CORPORATION
Zinc & Aluminum Die Castings in All Commercial Sizes
612 South 21st Street, Irvington 11, New Jersey

For more details circle NED-6473 on enclosed inquiry slip

free help! for product designers!

Illustrated booklet tells how MASONITE PRESDWOOD helps make better products

Could be just what you're looking for! Full of ideas to help you shape up new products, improve old ones. Masonite Presdwood;® those tough, grainless, all-wood hardboard panels, are so very versatile that designers and manufacturers are still discovering new ways to use them. You'll find them better—28 ways! Come in 39 types and thicknesses. Write today for "A Guide for Product Designers." It's yours—free!

BETTER HARDBOARDS FOR BETTER PRODUCTS

MASONITE® CORPORATION
DEPT. NED 7, BOX 777 CHICAGO 90, ILL.

"Masonite" signifies that Masonite Corporation is the source of the product

For more details circle NED-6474 on enclosed inquiry slip

Hanna Valves

. . . for Exacting Cylinder Control

¼" UNITITE

For light piping and tubing . . . control air, oil or water pressures up to 500 psi.

UNITITE

3-Way or 4-Way valves . . . quick-acting, packless . . . for pressures to 250 psi, in three mounting styles.

PILOT VALVES

3-Way . . . for direct control of small cylinders, automatic control of large cylinders as pilot for "Mastair."

FOOT OPERATED

Either single or double pedal . . . for pressures to 250 psi . . . provides quick, effortless control.

SOLENOID

New 4-Way valve . . . small, compact, low current consumption . . . adaptable to straight line piping.

"FLO-SET"

Provide for independent speed adjustment of forward and reverse cylinder piston stroke. Flo-Set Valves available in ¼", ⅜" and ½" for air, oil or water control.

You are assured of long, trouble-free service with Hanna Valves, known throughout industry for their practical design and precision construction. Regardless of your control problem, get complete information on Hanna valves. Our new catalog will give you full details.

WRITE for FREE LITERATURE

Write for detailed new literature on Hanna Valves and Cylinders.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1759 Elston Avenue, Chicago 22, Illinois

For more details circle NED-6475 on enclosed inquiry slip

▲ For more details circle NED-6476 on enclosed inquiry slip ▲

HERE'S HELP

in finding their causes and cures!

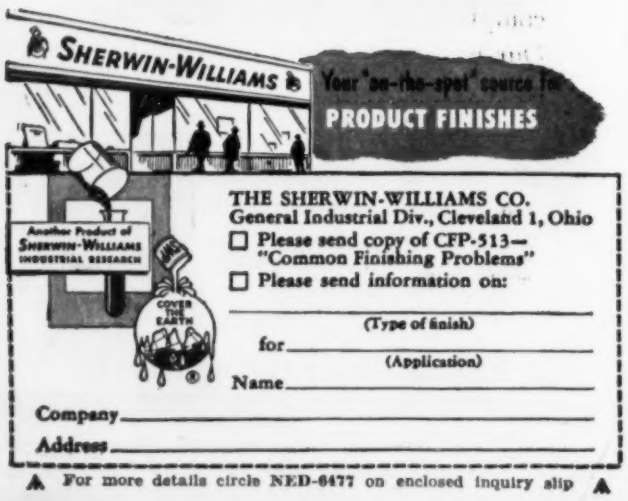
Bothered with sags . . . poor adhesion . . . improper drying . . . other product finishing difficulties?

This new Sherwin-Williams brochure offers a handy check list for determining causes and cures of most common finishing problems. It's part of the on-the-spot, local industrial service offered to manufacturers everywhere, through the Brown Label line of Sherwin-Williams Industrial Product finishes and Sherwin-Williams Branches.

These products include a complete line of quality industrial lacquers, enamels and specialty finishes for both wood and metal . . . baking and air-drying.

Check this handy local source for your requirements . . . ask your nearby Sherwin-Williams Branch for free copy of Brochure CFP-513 described here, or mail the coupon below.

SHERWIN-WILLIAMS INDUSTRIAL FINISHES



THE SHERWIN-WILLIAMS CO.
General Industrial Div., Cleveland 1, Ohio
☐ Please send copy of CFP-513—"Common Finishing Problems"
☐ Please send information on: _____ (Type of finish)
for _____ (Application)
Name _____
Company _____
Address _____

▲ For more details circle NED-6477 on enclosed inquiry slip ▲

TIME SWITCHES

control electrical systems with skip operation on selected days

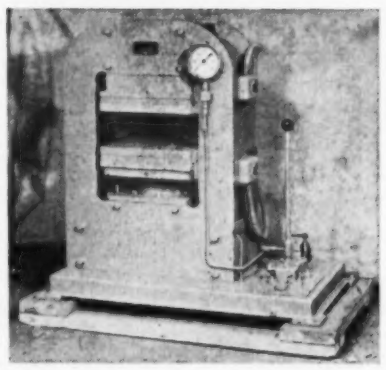
Made in single and double pole, and double throw models, series TS66 heavy duty Skipper time switches can control neon signs, lighting, pumps, motors, as well as automatic preheating of melting pots and kilns with skip operation for Sundays, holidays or other selected days. They also control automatically heating systems with day and night thermostats, or switching of low voltage thermostats.

Switches have a time dial and day dial. Screws are inserted into one or more of seven holes in day dial for those days on which operation of switch is to be skipped. Every 24 hours, cutout tripper rotates dial to next day position. Equipped with manual control and automatic reset, switches are rated 35 amp at 125 v. Minimum on or off time is 1 hour, maximum is 23 hours. Made by **International Register Co.**, 2624 W. Washington Blvd., Chicago 12, Ill.

▲ For more details circle NED-6478 on enclosed inquiry slip ▲

HYDRAULIC PRESS

hot platens maintain heat to 350° F



All steel hydraulic laminating press is now equipped with platens which can maintain temperatures up to 350° F or more with close control through thermostats. Electric heat is standard, but steam or hot water heat can also be obtained. Sizes range from 1 to 7 sq ft or more. A total force of 100 tons or more can be accomplished on this manually operated model which is practical for laboratory or limited production work. Double-acting pump is actuated by rocking handle back and forth. Various sizes and types of pumps are available to provide cylinder pressures of up to 3000 psi. Made by **Black Brothers Co.**, Dept. P, Mendota, Ill.

▲ For more details circle NED-6479 on enclosed inquiry slip ▲

DO YOU KNOW? There's a service available at low cost which permits long-range weather forecasting. A unique three-color map is sent out 30 days in advance each month which gives weather predictions, expected rainfall and anticipated average temperatures by days, cities and areas. For full details regarding this service, contact Blewett Weather Service, 919 E. California St., Pasadena 5, Calif.

▲ For more details circle NED-6480 on enclosed inquiry slip ▲

American Manufacturers Specify "Weld-Bilt" Trucks for Overseas Plants

Leading American manufacturers have learned that, in remote plants, where parts and service are hard to come by, Weld-Bilt Trucks stand up and deliver.

You can SEE the greater strength and durability in Weld-Bilt Equipment . . . in heavier arc-welded construction, in sturdier operating parts, in many innovations that assure easier, friction-free operation. Write today for catalog and details on the complete Weld-Bilt Line.

WEST BEND EQUIPMENT CORPORATION
MATERIALS HANDLING ENGINEERS
311 WATER ST. • WEST BEND, WIS.

▲ For more details circle NED-6481 on enclosed inquiry slip ▲

● Cords, Ltd. engineers and builds standard and special cord sets for any application. Proved dependability.

Most comprehensive stock of moulds and dies in existence for production of electronic cords and assemblies.

When you bring your cord problems to us you get the experience of the vast Essex Wire organization, plus integrated production of every component from wire bar to finished assembly. Write for details, explaining application.

WIRE SX PRODUCTS
CORDS LTD.
DIVISION ESSEX WIRE CORPORATION
121 DODGE STREET, DEKALB, ILLINOIS

▲ For more details circle NED-6482 on enclosed inquiry slip ▲

LIKE most production-wise foremen, Pop is a bug on tools. He knows that Nicholson X.F. (Extra Fine) Swiss Pattern Files, for example, are the finest finishing files you can buy. And heaven help the man who uses 'em on the wrong jobs!

Nicholson Swiss Pattern Files are widely used for removing burs left from previous machining operations, rounding out slots, smoothing small parts, and final finishing on all sorts of delicate and intricate pieces. They come in seven degrees of coarseness and scores of shapes and sizes. Available through your industrial distributor.

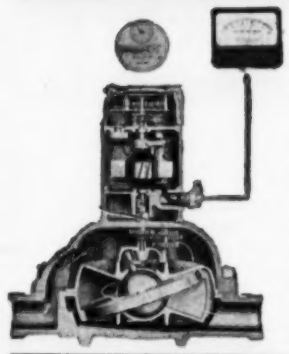
Send for the Nicholson booklets, *"Ten Special File Types"* and *"File Filosophy."* They're FREE.

NICHOLSON FILE CO., 34 ACORN ST., PROVIDENCE 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON U.S.A. NICHOLSON X.F. TRADE MARK
. . . a file for every purpose

▲ For more details circle NED-6483 on enclosed inquiry slip ▲

Remote indication and control of liquid flow



Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks.

With the Hays VERITROL you simply set a knob at the rate of flow desired . . . then, the VERITROL *controls* the flow of liquid at that set-rate.

for corrosive liquids

Acetic Acid, Aluminum Potassium Sulphate, Ammonia, Calcium Compounds, Carbolic Acid, Formaldehyde, Fruit and Vegetable Juices, Hydrogen Peroxide, Phosphoric Acid, Potassium Hydroxide, Sodium Compounds, Sulphuric Acid (concentrated), Stearic Acid, and many others

Send for a complete description of Hays Veriflow Meter and Veritrol. Bulletin 48-766

THE HAYS CORPORATION
MICHIGAN CITY 15, INDIANA

▲ For more details circle NED-6484 on enclosed inquiry slip ▲

New! WRICO Lettering Guide!

Now, with Bruning's new WRICO Lettering Guides and non-slip holder, you can letter quickly, easily, *professionally!*

With the new, exclusive skidproof feature, there's no more need for straightedges, weights or thumbtacks. You simply move the guide back and forth in the holder and letter at *any angle* on your drawing. Vertical, slant or italic letters are made by a simple adjustment of the scriber.

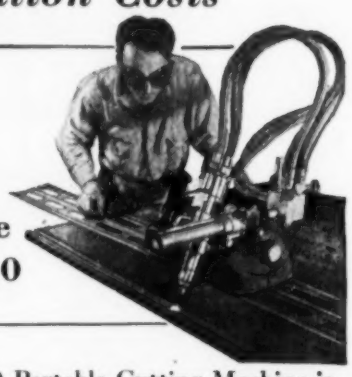
Write for bulletin to CHARLES BRUNING COMPANY, INC., Dept. C72, Teterboro, N. J.

BRUNING
Everything for the Engineer and Draftsman

▲ For more details circle NED-6485 on enclosed inquiry slip ▲

Speed Production.... Cut Fabrication Costs

With this Low-Priced Oxy-Acetylene Cutting Machine OXWELD CM-30



The OXWELD CM-30 Portable Cutting Machine is for cutting straight lines and bevels on metals up to 4 in. thick. It also will cut circles from 2¾ to 96 in. in diameter, and can be hand guided for simple shapes.

Convenient to Use

The CM-30 can be operated either on lightweight track for straight-line cutting, or on the work itself for cutting circles.

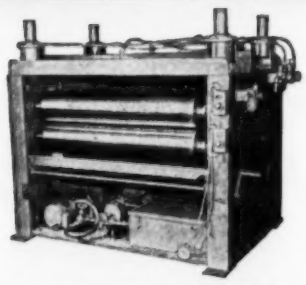
Write for a descriptive folder.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ For more details circle NED-6486 on enclosed inquiry slip ▲

UNION AUTOMATIC COMPOUND SPREADERS

SAVE *8 WAYS



1 "Die life increased 75%."
2 "Production increased 20%."
3 "Compound saving of 16%."
4 "Rejects reduced 10%."
5 "One helper eliminated."
6 "Paid for itself in 54 days."
7 "Able to use salvage stock for some operations."
8 "25,000 more pieces before changing dies."

MODELS TO FIT ANY STOCK UP TO 96" WIDTH

Union is the foremost designer and manufacturer of roller coating machines for application of drawing or stamping compounds and protective coatings.

Models may be equipped with hardened steel, or with neoprene-covered rolls—also with heated or cooled rolls—to meet your individual requirements.

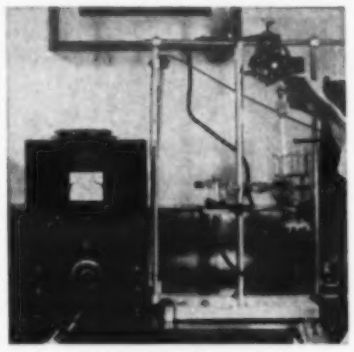
*The above claims are based on actual statements by users, both large and small—a number of whom have ordered a second and third machine.
Complete data and agent's name on request. Union will design and/or manufacture coating machines to meet your specific requirements.

UNION TOOL CORP.
314 E. MARKET ST., WARSAW, IND., U.S.A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

▲ For more details circle NED-6487 on enclosed inquiry slip ▲

LABORATORY POWER SUPPLY improved for greater output



Almost 67 per cent more power is available from the improved Powerhouse, a portable self-contained unit for supplying variable controlled power for laboratory electroplating, electroanalysis, energizing electromagnets and charging storage batteries. Plugged into 115-v 50-60 cycle line, unit gives maximum 10-amp output at 10 v instead of previous 6 v. Alternating current is available with variable output of 0 to 130 v and maximum capacity of 3 amp. Model is designed for continuous operation at full load, and employs selenium rectifier for long life, low internal resistance and voltage stability. The dc output is filtered to permit use with electronic circuits where ac ripple is undesirable. Made by **Fisher Scientific Co.**, 715 Forbes St., Pittsburgh 19, Pa.

▲ For more details circle NED-6488 on enclosed inquiry slip ▲

HEAVY-DUTY DEHUMIDIFIER time delay action automatically reactivates desiccant periodically

Portable, yet heavy-duty moisture control down to level as low as 15 per cent in enclosed areas up to 10,000 cu ft is afforded by 21 x 14-in. packaged model 25CT dehumidifier. Wide range of operating temperatures, from −40° to 100° F, provides low humidity control even at difficult ambient temperatures, such as in cold storage plants and warehouses. In operation, unit draws humid air through activated alumina and silica gel desiccant, then discharges dry, dust-free air back into room.

Dehumidifier features time-delay action in which it dries for 2½ hours then vaporizes absorbed moisture for 30 minutes, switching back and forth automatically. Desiccant is thus reactivated periodically by built-in heating element and lasts indefinitely. Another feature is separate reactivation air-intake vent which allows unit to maintain constant low humidity levels at constant controlled temperatures.

Unit draws maximum of 0.96 kilowatts from 110-v 60 cycle single-phase line. Self-contained fan motor is 1/100 hp, 24-w rotor type and moves 32 cu ft of air per minute through machine. Made by **Dryomatic Corp.**, Dept. ND, 812 N. Fairfax St., Alexandria, Va.

▲ For more details circle NED-6489 on enclosed inquiry slip ▲

DETECTO SCALES

There's a precision-accurate Detecto Scale for your specific weighing and counting need. The Detecto helps increase production, yet assures you maximum accuracy by making slightest weight discrepancies immediately visible.

DETECTO ALUMINUM SPEED SCALE

For increased production at lower cost! One operator with one Speed Scale does as much as two operators with ordinary scales. Sturdy, precision built, super-accurate. Ends overweight losses.

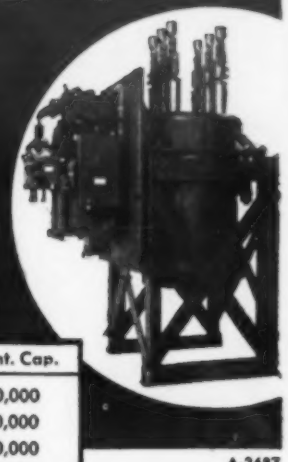
Write for Literature

DETECTO SCALES • INC.
MAKERS OF FINE SCALES SINCE 1900
541N PARK AVE. • BROOKLYN 5, N.Y.
SCALE ENGINEERS IN ALL PRINCIPAL CITIES

▲ For more details circle NED-6490 on enclosed inquiry slip ▲

For Interrupting Capacities 100,000 to 500,000 Kva

ALLIS-CHALMERS TYPE DZ INDOOR OIL CIRCUIT BREAKERS



Rated Kv	Rated Amperes	Kva Int. Cap.
7.2	600, 1200, 2000	100,000
13.8	600, 1200	150,000
13.8	1200	250,000
13.8	1200, 2000	500,000

A-3687

THESE INDOOR BREAKERS are widely used for station and industrial service. *Ruptor* arc interrupting devices minimize contact burning and oil deterioration. Silver-plated main current carrying contacts and special alloy arcing contacts provide long life. Mechanically trip-free operator provides instant breaker operation under all fault conditions.

For complete information on these circuit breakers call your nearest A-C sales office, or write to Allis-Chalmers, Milwaukee 1, Wisconsin. Ask for Bulletins 71B6179 and 71B6129.

Ruptor is an Allis-Chalmers trademark.

ALLIS-CHALMERS

▲ For more details circle NED-6491 on enclosed inquiry slip ▲

"If the Control of Air Flow Is Your Problem, Too"... SEE HONEYWELL FOR DAMPERS

HONEYWELL DAMPERS are custom-built to job specifications . . . in any size, shape or blade arrangement . . . with Honeywell electric or pneumatic positioners, or for manual operation.

Ideal for the control of air flow or to mix air of different temperatures, they are being used throughout industry . . . on cooling towers, engine test cells, recirculating ovens, foundry and paint room exhausts, drying kilns, and countless other places.

Call in our local engineering representative for a discussion of your requirements . . . he is as near as your phone. MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4529 Wayne Ave., Philadelphia 44, Pa.

MINNEAPOLIS **Honeywell**
First in Controls

• *Important Reference Data*
Write today for a copy of new Bulletin 8502.

▲ For more details circle NED-6492 on enclosed inquiry slip ▲

WHY tie up BIG PLATING EQUIPMENT ——— on small jobs?

GET A Udylite HANDIPLATER

THE UDYLITE HANDIPLATER will handle small plating runs and troublesome "overflow" production *efficiently* and *economically*. Simply plug the HANDIPLATER into the nearest A-C outlet; make the low voltage D-C plating connection, pour in some plating solution from a regular tank or barrel, and the HANDIPLATER is ready! You get high-quality finish, efficiently, at low cost.

SPECIFICATIONS: Koroseal lined, ribbed plating tub, half peck capacity, can be used for either acid or alkaline plating solution. Size: 16½" top dia., 13" bottom dia., 14" depth. Ball anode basket is standard equipment. Special anodes for acid solutions also available. Motor: ¼ HP, single phase, 110 volt A-C. V-belt drive, with special speed reducer. Base: Pressed Steel, 14" x 24". Shipping weight: 200 lbs. (Shipping point is Detroit, Michigan.)

THE Udylite CORPORATION
DETROIT 11, MICHIGAN

▲ For more details circle NED-6493 on enclosed inquiry slip ▲

CLUE TO A SOLUTION FOR YOU?
GAST Oil-less AIR PUMP does double duty on HOMOCARB FURNACE

PROBLEM: Get a compact pump that provides both vacuum and pressure in a gas-air system required for operation of Leeds & Northrup Microcarb Atmosphere Control applied to the Homocarb Furnace equipment.

SOLUTION: One Gast Integral Oil-less Air Pump does double duty. It provides low vacuum to draw a continuous 2 cu ft. per hr. sample of furnace gas over the atmosphere detector. At the same time the pump maintains a mixture of furnace atmosphere and air at 5 to 10 pounds pressure in the system on the discharge side of pump.

See our CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

Gast Application Ideas Booklet—showing 26 design problems solved—sent upon request.

RESULT: Positive displacement pump provides absolutely oil-free air, and eliminates worries about lubrication. Rotary design runs quiet and cool.

SUCH AN EXAMPLE as this may contain a clue to solving a similar or even totally different problem on your desk. You might be surprised at the innumerable applications for air pumps and air motors in the lower capacity ranges. Write today describing your original equipment problem. We'll send full details. "Air may be your Answer."

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY — AIR MOTORS · COMPRESSORS · VACUUM PUMPS
(TO THREE H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

▲ For more details circle NED-6494 on enclosed inquiry slip ▲

Roylyn COUPLINGS

FOR MANY VARIED INDUSTRIAL USES

- RAILROAD DIESEL FUEL LINES
- MARINE FUEL LOADING LINES
- TANK & LINE PRESSURE TIGHT CAPS
- PROCESSING & CHEMICAL INDUSTRIES
- LIQUID & AIR TRANSFER LINES
- LOADING VALVES & CONNECTIONS
- CLOSED HYDRAULIC SYSTEMS

OPEN COUPLINGS

SELF-SEALING COUPLINGS

CAPS & PLUGS

HOSE ASSEMBLIES

Features like these mean CONNECT WITH ROYLYN!

★ SIZE RANGE... ¼ inch to 2½ inches. Up to 6 inches in some styles.
★ PRESSURE RANGE... 650 to 6600 P.S.I.
★ MATERIALS... Aluminum alloy, brass, carbon steel, alloy steel and stainless steel.
★ OPERATION... A simple "twist of the wrist"—NO TOOLS REQUIRED!
★ POSITIVE LOCK... Locks with a "snap" and positively will not uncouple with vibration, pressure or rotation of the connected hose.
★ SAFETY... Laboratory tests for extremes of heat, cold, vibration and years of hard service have proven its rugged reliability.
★ VERSATILITY... Open nipple can be used with self-sealing coupling to provide shut-off on one side only. Also open coupling can be used with self-sealing nipple to provide check valve action.

There is a Roylyn Coupling available for practically any type of flexible connection for air, water, hydraulic and chemical applications. Write today for free illustrated catalog and nearest dealer. Inquiries regarding available dealerships are invited.

Roylyn INCORPORATED

ROYLYN, Incorporated
1712 STANDARD AVE., GLENDALE 1, CALIF.
WUX, TWX GLENDALE, CALIF. 7158

Roylyn makes Good Connections for You!

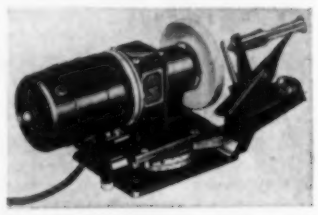
▲ For more details circle NED-6495 on enclosed inquiry slip ▲

MOISTURE METER detects moisture content in product

Moisture content of a wide variety of products ranging from cereal grains to foundry sands can be detected by instrument called a moisture balance. It dries samples by infrared radiation in 5 to 15 minutes. A highly sensitive torsion balance is the heart of the device which requires a 5-gram sample. Weight of moisture loss is shown on a scale calibrated in percentage. Made by **Central Scientific Co.**, 1702 Irving Park Rd., Chicago 13, Ill.

▲ For more details circle NED-6496 on enclosed inquiry slip ▲

WHEEL DRESSING MACHINE has vernier for angle setting



Radii, periphery and angles of grinding wheels on spindles can be dressed accurately with this diamond wheel dressing machine which mounts on work table. New cutting edges are exposed with minimum stock removal. Features are double and single row bearings on shaft for true turning of wheels, a motor designed for correct speed and horsepower and a vernier scale for quick precise angle setting. Made by **Eastern Tool Co.**, 300 Tolland St., East Hartford, Conn.

▲ For more details circle NED-6497 on enclosed inquiry slip ▲

SURFACE PYROMETER offered with 14 accessories

Accurate surface and subsurface temperature measurements can be made with Pyro surface pyrometer, offered with 14 different types of thermocouples and extension arms. It can be equipped with a Quick-Change connector that permits thermocouples to be snapped and locked onto the extension arms in few seconds with no tightening. Thermocouples are interchangeable without adjustment or calibration. Lock-swivel permits use at any desired angle without jarring loose. Temperature readings are taken from 4¾-in. direct-reading dial. Instrument is shock, dust and moisture resistant. Made by **Pyrometer Instrument Co.**, Bergenfield 34, N. J.

▲ For more details circle NED-6498 on enclosed inquiry slip ▲

Bulletin 705 Reversing Switches

A-B Quality

- Contactors mechanically interlocked
- Silver-alloy contacts need no cleaning

This complete line of switches provides reliable across-the-line starting and reversing of polyphase squirrel-cage and slip-ring motors, as well as certain types of single-phase motors used on machine tools and other industrial equipment. May also be used in motor plugging operations. Write for descriptive bulletin. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY QUALITY MOTOR CONTROL

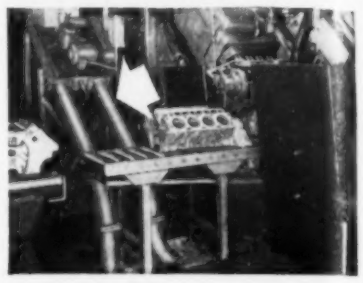
▲ For more details circle NED-6499 on enclosed inquiry slip ▲

when the Chips are Down —

Licensed under Hapman's Patents No. 2,147,199 and 2,432,756

All Honan-Crane equipment is sold on a performance guaranteed basis.

In this large motor car plant, Houdaille Enclosed-Flight Conveyor continuously removes chips from pit beneath twin banks of Bausch 12-Station Transfer Drilling Machine. Chips are deposited into portable hopper for disposal. Houdaille Conveyor is ideal for removing small material from confined area. This installation paid for itself out of savings in one year.



▲ For more details circle NED-6500 on enclosed inquiry slip ▲

MATHEWS CONVEYERS

A TYPE FOR EVERY PACKAGE HANDLING JOB

- WHEEL
- LIVE ROLLER
- SPECIAL CONVEYING MACHINERY
- TROLLEY
- BELT
- ROLLER
- PORTABLE
- ELEVATING

MATHEWS CONVEYER COMPANY — GENERAL OFFICES
MATHEWS CONVEYER COMPANY — PACIFIC COAST
MATHEWS CONVEYER COMPANY — CANADIAN DIVISION

Engineering Offices or Sales Agencies Principal Cities

▲ For more details circle NED-6501 on enclosed inquiry slip ▲

CHECK THIS

4-WAY SAVING WITH Work-O-Matic* Boxes

GET *all* the facts about Work-O-Matic Drop Bottom Boxes and Positioning Stands—the amazing new work-and-time savers. Write The Union Metal Manufacturing Company, Canton 5, Ohio.

*Patent No. 2,445,038 Other patents pending

UNION METAL
Materials Handling Equipment

▲ For more details circle NED-6502 on enclosed inquiry slip ▲

take 'em OUT . . . with a

HOUDAILLE CONVEYOR

Automatic System Solves Difficult Chip and Sludge Removal Problems . . . Cuts Costs, Speeds Production

Houdaille Conveyor's automatic loading and continuous materials transport handles any solid or fibrous waste (chips, abrasive sludge, scale, etc.) which settles to the bottom of a tank or hopper. Many plants of all sizes, in many types of operation, have saved substantially on labor, maintenance, down-time and other production costs by installing one or more Houdaille Conveyor systems.

Check these important Houdaille advantages:

- Eliminates costly manual cleaning and handling methods
- Operates continuously or intermittently as needed without shutting down productive machinery
- Readily adaptable to almost any need, any space or traverse requirement . . . ideal for restricted areas
- Dependable, trouble-free automatic operation; requires little or no maintenance attention; quickly pays for itself out of savings.

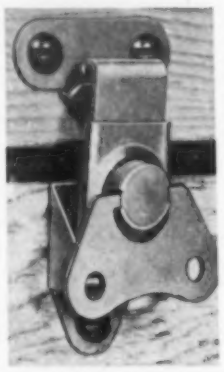
Write for complete information and case histories. Honan-Crane Engineering Service is available.

Honan-Crane Corporation
405 Wabash Avenue, Lebanon, Indiana
Subsidiary of **Houdaille-Hershey Corp.**

WORLD'S LEADING OIL FILTER MANUFACTURER

▲ For more details circle NED-6503 on enclosed inquiry slip ▲

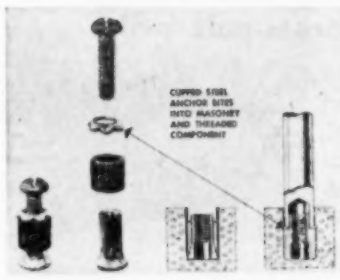
LOCKING FASTENER
provides high closing pressures



Although small in size, Link-Lock No. 3 positive action fastener, has high closing pressure for waterproof sealing. It provides up to 90-lb pulldown pressure on gaskets. Fastener has good impact and drop test resistance and safely carries up to 300 lb tension loading. When locked, it lies flat against side of case. Engagement latch detail can be varied to meet different design conditions. A 180-degree turn opens or closes it. Made by **Simmons Fastener Corp.**, 1757 N. Broadway, Albany 1, N. Y.

▲ For more details circle NED-6503 on enclosed inquiry slip ▲

SCREW ANCHOR
holds bolts, machine or wood screws



Made with threaded insert, lead sleeve and cup-shaped fluted steel anchor, this screw anchor resists vibration and can be used with stove bolts, machine or wood screws in brick or masonry. When driven into place by a tamping tool provided with every 100 anchors, the lead mushrooms out and the steel anchor collapses, forcing sharp edges into the masonry and threaded component. Blow pipe for insertion into masonry hole to blow out dirt and dust is also provided. Made by **Super-Grip Anchor Bolt Co.**, 3333 N. 22nd St., Philadelphia 40, Pa.

▲ For more details circle NED-6504 on enclosed inquiry slip ▲

X-RAY CABINET
for assembly line inspection

Made for either radiographic or fluoroscopic inspection of parts, this industrial cabinet is designed for straight line or rotary assembly line x-ray inspection. Trays for holding film and parts are moved into cabinet from either end, facilitating exposure. After each exposure, lead-lined doors are raised and parts trays are moved into position for next exposure. Cabinet is completely lead lined and has pneumatically-operated sliding doors. Made by **Bar-Ray Products Inc.**, 211 25th St., Brooklyn 32, N. Y.

▲ For more details circle NED-6505 on enclosed inquiry slip ▲

▲ For more details circle NED-6507 on enclosed inquiry slip ▲

DEMING
CONDENSATION RETURN UNITS

(Above) Fig. 4958 "Hotshot" centrifugal jet condensation return units. Capacities cover a range of 500 to 10,000 square feet of radiation.

(Right) Fig. 4301 "Motor Mount" centrifugal pump condensation return units cover a range from 2,000 to 40,000 square feet of radiation.

These modern, efficient "fuel-savers" return the condensate from steam coils, radiators, or steam-operated equipment back to the boilers.

Deming "Hotshot" units are unusually compact and require very little floor space.

Deming "Motor-Mount" units are made in Single and Duplex models. Motors have standard "NEMA" type "C" mounting flange and are furnished for single phase, two or three phase or direct current, as specified.

Write for BULLETIN NO. 4400 which includes performance tables of capacities, pressures, and other useful data.

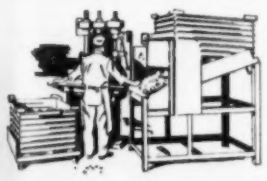
THE DEMING COMPANY
520 BROADWAY • SALEM, OHIO

▲ For more details circle NED-6508 on enclosed inquiry slip ▲

Write today for complete information

WS CONVEYERS
GENERAL OFFICES
COMPANY . . . ELLWOOD CITY, PENNSYLVANIA
PACIFIC COAST DIVISION
COMPANY WEST COAST . . SAN CARLOS, CALIFORNIA
CANADIAN DIVISION
COMPANY . . . . . PORT HOPE, ONTARIO
Principal American and Canadian Cities

▲ For more details circle NED-6501 on enclosed inquiry slip ▲

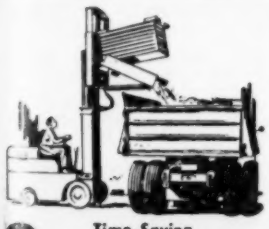


1 POSITIONING MATERIALS

A sure way to cut costs today is work-level positioning of parts-in-process. Work-O-Matic Drop-Bottom Boxes, on Union Metal Positioning Stands, effectively accomplish this. And a reservoir supplies the operator while empty boxes are replaced. Studies prove this 2-way advantage increases production up to 50%!

2 Easier HORIZONTAL MATERIAL MOVEMENT

Work-O-Matic Multi-Duty Boxes are performing all the functions of the best fork tiering skid boxes. In addition, Work-O-Matics allow 5-way fork entry for faster, easier handling in cramped quarters in both the factory and storage areas.



3 Time-Saving MECHANICAL DUMPING

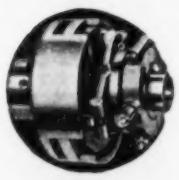
The superior drop-bottom feature of the Work-O-Matic Box, keeps the dumping point constant at any fork height. This permits accurate dumping with 100% control of spillage. Also, Work-O-Matics eliminate the necessity for manual removal of material, releasing labor for more skilled work.

4 Space-Saving STORAGE

Four Work-O-Matic Boxes can be tiered in the space usually required for *three* ordinary boxes, providing ⅓ more storage in the same floor space. Thus more parts or materials may be removed from the factory area and stored, ready for the next operation or shipment. Space is conserved in the factory and *fully* utilized in the storage area.

▲ For more details circle NED-6502 on enclosed inquiry slip ▲

This Saw "Mows 'Em Down



Even With the Ground"

The LITTLE GIANT Saw cuts down trees and stumps at any angle, bulldozes logs, bores post holes, propels itself anywhere a man can walk and loads itself on a truck. ROCKFORD CLUTCHES control power transmission in this versatile unit. Let ROCKFORD clutch engineers help solve *your* power transmission control problems.

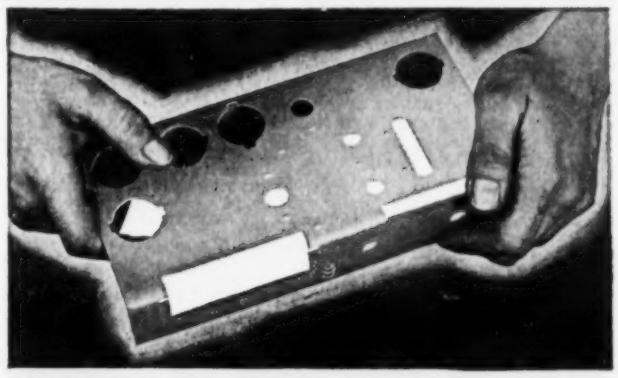
B-W ENGINEERING MAKES IT WORK
B-W PRODUCTION MAKES IT AVAILABLE

ENGINEERING BULLETIN SENT ON REQUEST

ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

ROCKFORD CLUTCHES

▲ For more details circle NED-6506 on enclosed inquiry slip ▲



COPPER-PLATED PARTS STAY BRIGHT AND CLEAN
when Coated with WATER DIP #33

Here's a simple, low-cost finish that keeps copper-plated surfaces bright, free from fingerprints, chemically clean. It's M & W Water Dip #33. Work goes directly from the last hot water rinse into Water Dip #33—no need for rehandling and drying!

For the complete story on Water Dip #33, write for Bulletin #117, or let our M & W technical consultant discuss your requirements privately with you.

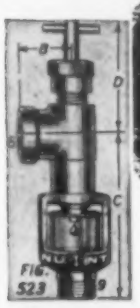
PIONEERS IN PROTECTION — 76th YEAR

MAAS & WALDSTEIN CO. 438 RIVERSIDE AVE. NEWARK 4, N. J.
Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.
MANUFACTURERS OF INDUSTRIAL FINISHES

▲ For more details circle NED-6509 on enclosed inquiry slip ▲

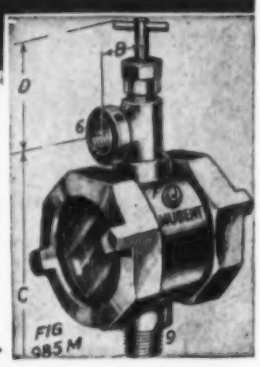
NUGENT SIGHT FEED VALVES
for pressure or gravity oil systems

A model to suit every need



▲ 13 models designed for working pressures to 125 psi. Sizes to ¾ inch.

Medium size needle type with steel valve stem. 9 Models. Sizes to ¾ inch. ▶



9 models for larger machinery. "Swivel and lock" type for sight chamber adjustment to most convenient view position. ▶

Oil flows from 2 drops per minute to 21 U. S. gals. per hour depending on valve model and oil viscosity. All are vented to prevent air binding. Glasses and screens are removable for cleaning without need of oil flow interruption. Write for full details on complete Nugent Sight Feed Valve line.

Wm. W. Nugent & Co., Inc.
421 N. Hermitage Ave. CHICAGO, 22, ILLINOIS
Est. 1897

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . Representatives in Principal Cities

▲ For more details circle NED-6513 on enclosed inquiry slip ▲

NEWARK *Metallic* FILTER CLOTHS

Here are five different weaves of Newark Metallic Filter Cloths. All different in the arrangement of the strands; hence different also in their functioning.

Study the shape of the solids in your solution being filtered. That's just as important as the size, if you want clarity of filtrate. Then write us fully about the solids and we'll be glad to recommend the weave of the cloth that will "stop" them.

Many malleable metals are still available so, if necessary, we can probably supply you with a material that will also withstand highly corrosive conditions. When writing, also give solution characteristics.

All Newark Filter Cloths are woven in our own plant, on our own looms, by our own skilled weavers.

NEWARK for ACCURACY

Our entire line of Filter Cloths, Wire Mesh and Space Cloth, Sieves, "End-Shāk" Testing Units and other Newark Products are described fully in our new Catalog D. Send for a copy.

Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

Philadelphia 3, Penna. 5211 Widener Bldg. | San Francisco, Calif. 3100 19th St. | Chicago, Ill. 38 N. Wacker Dr. | New Orleans, La. 520 Maritime Bldg. | Los Angeles, Calif. 1400 So. Alameda St. | Houston, Texas P. O. Box 1979

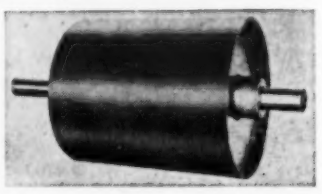
▲ For more details circle NED-6514 on enclosed inquiry slip ▲

PORTABLE SPRAYER
lightweight unit holds 1½ gallons

Carried by the pump handle, No. 110 compressed air sprayer has a 1½-gallon capacity. Tank of lightweight unit is electric seam welded and is made of Armco Zincgrip galvanized metal for rust resistance. It has dome top, die cast handle and top for quick closure. Also incorporated are 12-in. brass extension tube and funnel top for easy filling. Longer extensions are available. Made by **R. E. Chapin Mfg. Works, Inc.**, 1950 Chapin St., Batavia, N. Y.

▲ For more details circle NED-6515 on enclosed inquiry slip ▲

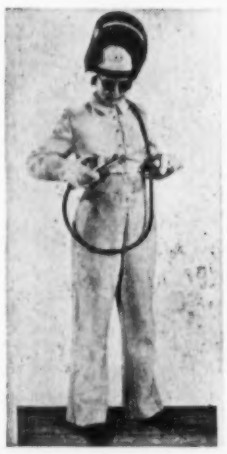
MAGNETIC PULLEY
has efficient cross-pole pull



Radial Design magnetic placement, incorporated in line of permanent magnetic pulleys, results in efficient separation of ferrous materials on conveyor production lines. Magnetism is perpendicular, rather than parallel, to the pulley circumference, allowing ferrous material passing over the pulley to be held across the magnetic poles. Pulleys are made in 12, 16, 18, 20 and 24-in. diameters for speeds from 50 to 40 rpm. Widths vary from 12 to 48 in., depending upon diameter. Made by **Magnetic Engineering & Mfg. Co.**, 700 Van Houten Ave., Clifton, N. J.

▲ For more details circle NED-6516 on enclosed inquiry slip ▲

WELDERS' CLOTHING
for protection of women workers



Fitting snugly so that no opening exists to permit entrance of flying sparks, feminine welder's protective clothing is styled to allow free body movement. Lightweight tailored overalls look like women's slacks. Flared trouser legs protect feet and make garment easy to put on and take off over safety shoes. Yoked back of tailored coat and short jacket give freedom of arm movement. Sleeves are shaped to fit. Clothing is made of chrome-tanned leather with suede-like appearance. Offered by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

▲ For more details circle NED-6517 on enclosed inquiry slip ▲

Send For Your Free Copy

SLIPPING ACCIDENTS? Write for Booklet A-4

This Free 8-page Booklet Shows You How To End Them with **A.W. ALGRIP**
ABRASIVE ROLLED STEEL FLOOR PLATE

- A.W. ALGRIP is the world's *only* Abrasive Rolled Steel Floor Plate.
- Wet or dry, ALGRIP prevents slipping—even on steep inclines!
- Light, tough—thinner sections can be used.
- Easy to install—needs no maintenance.
- Over 1001 plant and product applications—wherever men walk or climb.

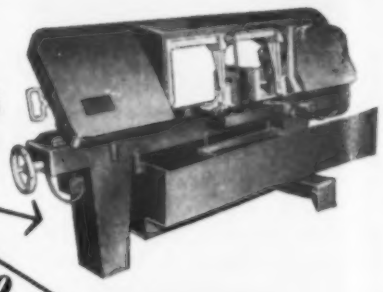
THERE'S NEVER A SLIP ON A.W. ALGRIP

A.W. ALGRIP
ABRASIVE ROLLED STEEL FLOOR PLATE
Product of ALAN WOOD STEEL COMPANY
Conshohocken, Pa.
Over 125 Years of Iron and Steel Making Experience

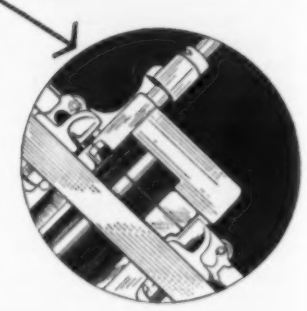
Other Products: PERMACLAD Stainless Clad Steel · A W SUPER-DIAMOND Floor Plate · Plates · Sheets · Strip · (Alloy and Special Grades)

▲ For more details circle NED-6518 on enclosed inquiry slip ▲

you can see the CUTTING ACTION



Kalamazoo METAL CUTTING BAND SAW



Yes . . . you can look directly down into the cut as it's being made, giving you instant warning of any need for adjustment. And blade wear and dullness can be quickly detected, too. Result? Faster, cleaner precision cutting, longer blade life.

Investigate the many other exclusive Kalamazoo Band Saw features that give you lowest cost metal cutting. Three sizes, all available with coolant equipment and casters.

MACHINE TOOL DIVISION
Kalamazoo TANK and SILO CO.
712 HARRISON ST., KALAMAZOO, MICHIGAN

▲ For more details circle NED-6519 on enclosed inquiry slip ▲

Another FIRST by ARO

Instant PUSH-BUTTON *Reverse*

A REVOLUTIONARY SCREW DRIVER AND NUT SETTER

ARO's new push-button valve means *instant reverse action* . . . no need to remove from work . . . no stopping to turn levers . . . no wasted time.

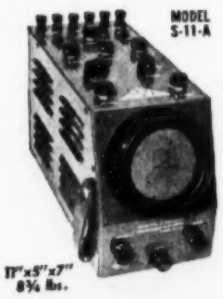
Adjustable clutch (available with positive clutch) Length 7-11/16" . . . outside diameter 1-5/16" . . . weight 1.4 lb.

This outstanding tool must be seen in action to appreciate its amazing action. Write for literature.
The Aro Equipment Corporation, Bryan, Ohio.
Aro Equipment of Canada, Ltd., Toronto

ARO AIR TOOLS Also . . . LUBRICATING EQUIPMENT . . . HYDRAULIC EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

▲ For more details circle NED-6520 on enclosed inquiry slip ▲

THE INDUSTRIAL POCKETSCOPE® BY WATERMAN



11"x5"x7"
8¾ lbs.

The Model S-11-A Industrial & Television POCKETSCOPE is a small, compact, lightweight instrument for observation of repetitive electrical circuit phenomena. The Industrial & Television POCKETSCOPE is a complete Cathode Ray Oscilloscope incorporating the Cathode Ray Tube, vertical, horizontal, and intensity amplifiers, linear time base oscillator, blanking, synchronization means and self-contained power supply. This Industrial & Television POCKETSCOPE uses the new 3" Cathode Ray Tube especially developed for this lightweight and compact instrument. The Industrial & Television POCKETSCOPE can be used, not only for AC measurements, but for DC as well, inasmuch as it has vertical and horizontal amplifiers which are capable of reproducing faithfully within —2 db, from 0 to 200 KC.

Vertical and horizontal channels: 0.1v rms/inch with response within —2DB from DC to 200 KC, Repetitive time base continuously variable from 3CPS to 50KC with positive sync, Intensity modulation either through Amplifier or direct, Blanking of return trace is optional, Trace expansion is at least twice screen face, Line voltage variations, variation of input impedances, or manipulations of controls do not bounce trace off screen. The Scope stabilizes immediately.

WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PA. CABLE ADDRESS: POKETSCOPE

WATERMAN PRODUCTS INCLUDE:

S-4-A	SAR	PULSESCOPE
6-5-A	LAB	PULSESCOPE
S-10-B	GENERAL	POCKETSCOPE
S-14-A	HIGH GAIN	POCKETSCOPE
S-14-B	WIDE BAND	POCKETSCOPE
S-13-A	TWIN TUBE	POCKETSCOPE

Also RAKSCOPES, LINEAR AMPLIFIERS, RAYONIC TUBES and other equipment

WATERMAN PRODUCTS

▲ For more details circle NED-6521 on enclosed inquiry slip ▲

HALLOWELL "UNI-TRUKs"

make tough jobs easy!

- All-steel, all-welded construction eliminates dead weight, reduces maintenance.
- Ribbed angle nose takes more weight without bending, makes pickups easier.
- Concave cross members accommodate drums, bags, cartons, rolls, kegs, etc.
- "UNI-TRUKs" roll freely, handle more easily.

Write for descriptive bulletin 789. STANDARD PRESSED STEEL Co., Jenkintown 24, Pennsylvania.

HALLOWELL MATERIALS HANDLING DIVISION

sps

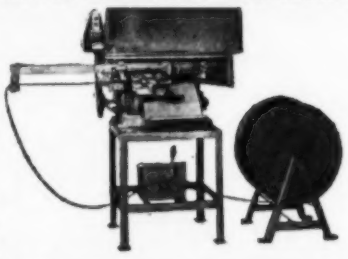
JENKINTOWN, PENNSYLVANIA

For more details circle NED-6522 on enclosed inquiry slip

Measure, Cut and Strip Insulated Wire

IN ONE SPEEDY OPERATION

ON ARTOS Automatic MACHINES



Does your production require cutting and stripping of insulated electric wire, cord, cable, etc.?

You can produce finished leads much *faster* . . . as many as 3000 per hour in 15-in. lengths . . . on this Artos Automatic Machine. Substantial time savings are obtained over the best manual or semi-automatic methods.

Operation is fully automatic—wire is taken from the reel, measured, cut to length and stripped at one or both ends. Unskilled help can handle the machine. Set-up is easy for different wire types and lengths.

MODEL CS-6E CAPACITY

FINISHED PIECES PER HOUR—From 3000 per hour up to 15 in. lengths to 500 per hour in 64-97 in. lengths.
MAXIMUM STRIPPING LENGTH—1½ in. at each end (greater stripped lengths are special).
MAXIMUM CUTTING LENGTH—97 in.
MINIMUM CUTTING LENGTH—2 in. (also as short as ⅞ in. under certain conditions).
TYPES OF WIRE HANDLED—Solid or stranded single conductor wires, parallel cord, heater cord, service cord, etc.
MAXIMUM WIRE SIZE—No. 10 stranded or No. 12 solid.

Other Artos Machines

The complete line of Artos automatic wire cutting and stripping machines will handle *cut lengths* from 1 in. to 60 ft., *stripped lengths* to 6½ in. at one end and 8½ in. at the other, wire from No. 12 to No. 000 gauge, and up to 3600 pieces per hour. Ask for recommendations on your problems.

WRITE FOR BULLETIN

Get the complete story—write for Bulletin 35-C on Artos Model CS-6 machines.

ARTOS ENGINEERING CO. Automatic Wire Cutting and Stripping

2751 S. 28th St. • Milwaukee 46, Wis.

For more details circle NED-6523 on enclosed inquiry slip

Drill Hardened Steels without Annealing—

USE The New IMPROVED "HARDSTEEL" DRILL

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.

Division Black Industries

1380 East 222nd St. • Cleveland 17, Ohio

Also makers of—BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS

Write for information

For more details circle NED-6524 on enclosed inquiry slip

OFFICE CHAIRS
seat and back are adjustable

Office worker fatigue can be reduced by installing chairs which can be adjusted for individual differences to provide full support for spinal column and hip bones. Aluminum Cushioner office chairs can be adjusted in this manner. They incorporate foam rubber cushioning and resilient spring base with durable upholstery. Made by **Remington Rand Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

For more details circle NED-6525 on enclosed inquiry slip

ANGLE CHECKING TOOL
adaptable for sheet metal work

Angles on sheet metal parts are checked readily with this Angle-Check protractor. Accurate to within 5 minutes, device can be used in tooling, production and inspection departments. List price is $14.95. Made by **Sheridan-Gray Co.**, 131 N. Benita Ave., Redondo Beach 1, Calif.

For more details circle NED-6526 on enclosed inquiry slip

FORK LIFT TRUCKS
diesel and gasoline engine models

Capacity of 3000 lb at 15-in load center is rating of both model FT30-15 gasoline and FTD30-15 diesel powered fork lift trucks. The four-cylinder, 49-hp gasoline engine that powers the former and the diesel engine that drives the latter have same displacement, bore, stroke and mounting dimensions. Mechanical features of both models include removable wet sleeve type cylinder liners, quick-change 11-in. industrial clutch, single lever gear shift mounted on steering columns and center point steering. Both are available in five standard masts with 72, 84, 108, 114 and 120-in. lifts. Made by **Buda Co.**, Dept. LF, 15440 Commercial Ave., Harvey, Ill.

For more details circle NED-6527 on enclosed inquiry slip

special-type...

A'G'A AGASTAT TIME DELAY RELAY

A'G'A STIMSONITE REFLECTORS

A'G'A AIRPORT LIGHTING

A'G'A MARINE LIGHTING EQUIPMENT

AN AGASTAT TIME DELAY RELAY for every requirement

A'G'A DIVISION OF ELASTIC STOP NUT CORPORATION OF AMERICA 1027 NEWARK AVE., ELIZABETH 3, NEW JERSEY

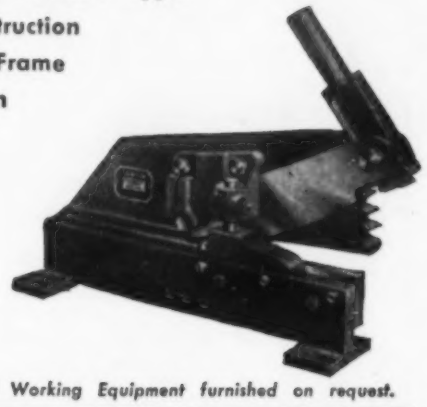
For more details circle NED-6528 on enclosed inquiry slip

SAMSON HAND SHEARS

Bench Type

- All Steel Construction
- Unbreakable Frame
- Easy Operation

IMMEDIATE SHIPMENT



Catalog of Metal Working Equipment furnished on request.

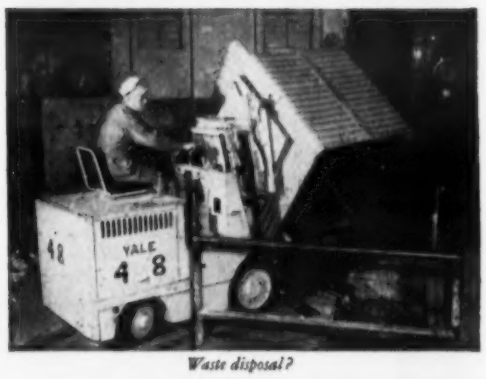
SIZE	No. 3R3	No. 3R4	No. 3R5	No. 3R6	No. 4R10
Cuts sheet or plate up to	14 ga.	1/8"	3/16"	1/4"	5/16"
PRICE	$17.30	$25.00	$31.70	$67.00	$104.25

f.o.b. New York, prices subject to change

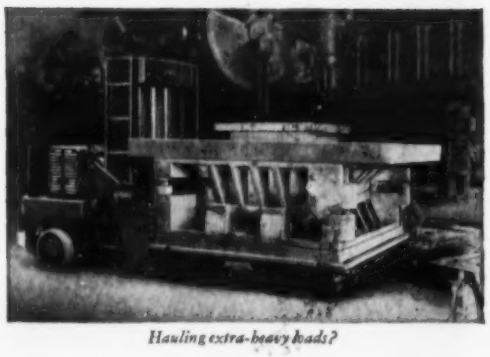
JULIUS BLUM & CO., Inc.
Established 1910
536 West 22nd St., New York 11 • WAtkins 9-7042

For more details circle NED-6529 on enclosed inquiry slip

B.F.Goodrich



Waste disposal?



Hauling extra-heavy loads?

Where do you use industrial tires?

Here's how TW ANALYSIS can cut your costs

● We have a plan that is saving up to 50% on tire and wheel costs for industrial tire users. It's called the Tire & Wheel Analysis Plan. It's applicable no matter what your usage of industrial tires. On request and without charge, a man who knows industrial tire problems looks over your operations, analyzes your particular needs. Then he makes maintenance and service recommendations. He also recommends the exact type, size, tread design and tread compound which best suits *your* operations. He shows you how to save through retreading. Remember his recommendations are impartial because B. F. Goodrich makes *all* types and kinds of industrial tires. The BFG man has no axe to grind for just one or two particular types. He has them all.

See your nearby B. F. Goodrich Dealer for your immediate industrial tire needs. For additional information on the B. F. Goodrich Tire & Wheel Analysis Plan, use the attached coupon. A similar plan is available for manufacturers of industrial hauling equipment.

The B. F. Goodrich Co.
Department TW-183
Akron, Ohio

Please give me additional information on your new Tire and Wheel Analysis plan.

Name_____
Title_____
Company_____
City_____ State_____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

For more details circle NED-6530 on enclosed inquiry slip

Solve CONTROL PROBLEMS *with* TELEFLEX

Are mechanical remote controls your problem? Then consider these advantages of Teleflex:

- Efficient in both tension and compression
- Unlimited in rotary motion
- Assembled from stock parts
- Rugged and flexible
- Easy to install and maintain

Our engineers will cooperate with you on any problem involving mechanical remote controls.

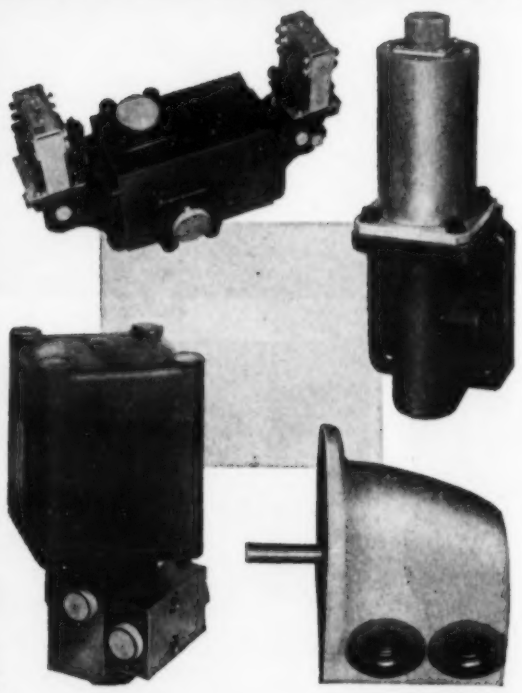
TELEFLEX INCORPORATED
248 WEST WINGOHOCKING STREET
PHILADELPHIA 40, PA.

WRITE FOR CATALOG 300 C

For more details circle NED-6531 on enclosed inquiry slip

SUPERDRAULIC

REMOTE CONTROLS • TEST STANDS • TRANSMISSIONS • VALVES • PUMPS



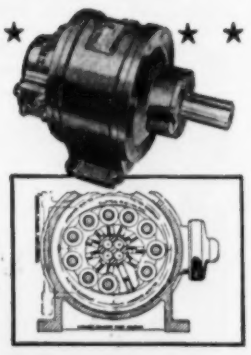
HYDRAULIC VALVES

RELIEF — CHECK — SEQUENCE
PROPORTIONAL — PRESSURE REDUCING
TWO WAY — FOUR WAY

We manufacture highest quality standard and special valves of all types for use with hydraulic pumps in power units and hydraulic equipment for all applications.

Write for our new catalog

★ ★ ★ ★ ★ ★ ★ ★ ★



FAMOUS SUPERDRAULIC HIGH PRESSURE PUMP

Develops up to 60 H.P. at 5,000 P.S.I. Let us quote on your requirements.

Superdraulic CORPORATION

14256 WYOMING AVE. • DETROIT 4, MICH.

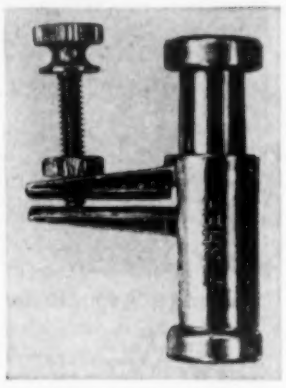
For more details circle NED-6532 on enclosed inquiry slip

GLASS FIBER TANKS
lightweight units resist corrosion

Molded from lightweight, impact resistant laminated Fiberglas, Laminex tanks have high resistance to chemical attack, are nonconductive and can withstand freezing as well as boiling temperatures. Units have smooth white interior that will not discolor and can be equipped with dam overflows and drains. Walls are of uniform thickness due to fabrication with matched molds and are reinforced with vertical ribs. Top rail is 1-in. diameter pipe over which is molded Fiberglas. Made by **MacDermid Inc.**, Anodex St., Waterbury 20, Conn.

For more details circle NED-6533 on enclosed inquiry slip

VARIABLE-FLOW PINCHCOCK
for controlling gas and fluid flow



Flow of gas and fluid through rubber and other flexible tubings up to ⅜-in. diameter can be varied to particular needs by Vari-Flow pinchcock. It is of nonrusting Castaloy construction and can be attached and removed without having to draw it over the end or by removing connections. Flow is varied by a screw which controls jaw opening. Made by **Fisher Scientific Co.**, 715 Forbes St., Pittsburgh 19, Pa.

For more details circle NED-6534 on enclosed inquiry slip

FLOOR MACHINE
designed to scrub, wax and polish

As easy to use and store as a home type vacuum cleaner, the P-11 Floor Maintainer is built to scrub, wax, polish and steel wool floors in all but the largest institutions. Lightweight unit functions on linoleum, rubber or asphalt tile, terrazzo, concrete or wood flooring. Wheels are self-retracting in operating position. Power is furnished by a ⅓-hp constant duty motor. Attachments include various brush types, steel wool and lambs wool pads. Made by **Clarke Sanding Machine Co.**, Dept. NED-P, 30 E. Clay St., Muskegon, Mich.

For more details circle NED-6535 on enclosed inquiry slip

MAXI-PICH V-BELT SHEAVES

four reasons why— YOU SHOULD DEMAND

"V-BELT" MAXI-PICH Stationary & Motion Control Sheaves

They're engineered for rugged performance from best grades of heat-treated steel and soft-gray iron castings.

You get every advantage of other sheaves **plus** these 4 outstanding features—

1. MAXIMUM PITCH DIAMETER VARIATION
2. CONSTANT BELT ALIGNMENT
3. INTERCHANGEABLE BUSHINGS
4. USES COMMERCIAL V-BELT AND COMPANION SHEAVE

"V-Belt" Maxi-Pich Sheaves fit any factory machine—save installation and operating costs—speed production. For the FULL STORY, ask your "V-Belt" dealer, or write to the V-Belt Engineering Co., Richmond, Va.

V-BELT ENGINEERING COMPANY
RICHMOND, VIRGINIA

For more details circle NED-6536 on enclosed inquiry slip

For more details circle NED-6537 on enclosed inquiry slip

STRONG?

You bet! Hackney Deep Drawn Parts have added greater strength and vibration resistance to many a product. Formed from one piece of sheet metal, Hackney *Seamless* Deep Drawn Shapes and Shells often eliminate welded, bolted or riveted seams. They're lightweight, too . . . their streamlined appearance adds extra sales appeal . . . and they can save production time now spent on welding and machining operations. Write us today, or send a sketch of your design requirements.

PRESSED STEEL TANK COMPANY
Manufacturer of Hackney Products
1450 S. 66th St., Milwaukee 14
1324 Vanderbilt Concourse Bldg., New York 17
255 Hanna Bldg., Cleveland 15
936 W. Peachtree St., N.W., Room 136, Atlanta 3
208 S. LaSalle St., Room 779, Chicago 4
578 Roosevelt Bldg., Los Angeles 17

Hackney

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-6538 on enclosed inquiry slip

New Way to Cut Costs of Railway Car Handling!

SEND FOR THIS FREE BOOK

Get complete information on the Trackmobile . . . today's answer to low cost railway car handling. It operates on road and track—has a draw-bar pull equal to that of a 20-ton locomotive and is priced at a fraction of the cost of conventional-type plant locomotives. Speed hauling, save time, reduce costs *now*—write for Bulletin TM-101.

WHITING CORPORATION
15660 Lathrop Avenue • Harvey, Illinois

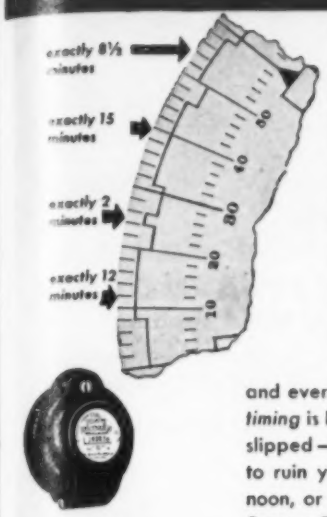
WHITING TRACKMOBILE®

For more details circle NED-6539 on enclosed inquiry slip

NO MORE GUESSWORK!

PROCESS TIMING

automatically recorded by a Little "TIME CLOCK"



"The cure must be 8½ minutes"—"the heat must be applied exactly 15 minutes"—"the plating must take just 2 minutes"—"the pigment must be mixed just 12 minutes"—etc.

The *Servis Recorder* checks on this—it records just what happened—it "*times the process.*" You are no longer in the dark; from now on you know all day and every day whether your process *timing* is lived up to—or if somebody slipped—if something went wrong to ruin your product for that afternoon, or that whole shift! Write for Process Timing Catalog. The Service Recorder Co., 1375 Euclid Avenue, Cleveland 15, Ohio.

Bolt this 2 lb. Recorder right to the machine itself; Let the "Process" record itself on the chart —(No ink, no pencil, no wires; the record is recorded in wax).

The Servis Recorder
The "Time Clock" for Machinery

For more details circle **NED-6540** on enclosed inquiry slip

Announcement by

Bay State Abrasive Products Co.
Westboro, Massachusetts

Our latest pioneering development, "GRITCLOTH", is an open-mesh abrasive fabric for both mechanical or hand sanding operations. Tests show that it can be used wet or dry, flat or folded, and will outlast by many times the regular wet or dry abrasive papers now on the market. Watch for further details in the Bay State advertising.

BAY STATE

For more details circle **NED-6541** on enclosed inquiry slip

FEL-PRO offers engineering help ...on GASKETING problems

that extends from **DESIGN**

and **MATERIAL SELECTION**

to the **FINAL INSTALLATION**

FEL-PRO's gasketing service is *complete!* When you call on FEL-PRO you get the benefit of more than 30 years' experience in gasketing skill. You get help in the design of specialized gaskets, help in the selection of a wide variety of gasketing materials to best suit your needs, and finally, help in the proper installation and handling of gaskets and packings. This complete engineering service is your assurance of high performance standards and maximum economy. FEL-PRO invites your inquiries on any gasketing problem.

FELT PRODUCTS MFG. CO. 1510 Carroll Avenue, Chicago 7, Illinois
Warehouses in: Atlanta, Boston, New York, Los Angeles, Oakland, Portland

5887R

FEL-PRO Utilize Newest Materials ENGINEERED Specifically designed for your product **gaskets**

For more details circle **NED-6542** on enclosed inquiry slip

BLOW TORCHES operate on red or white gasoline

An improved combustion control now makes it possible to burn either leaded or non-leaded gasoline as fuel in the 32A-1 or 600A-1 blow torch. Both of these models operate successfully on the more convenient red fuel. Torches are now in jobber stocks ready for immediate delivery. Made by **Clayton & Lambert Mfg. Co.,** 1701-1715 Dixie Highway, Louisville 10, Ky.

For more details circle **NED-6543** on enclosed inquiry slip

STATIC DETECTOR detects and locates charges

Clipping onto a Keithley vacuum tube Electrometer, model 2005 static detector provides a combination for detecting and locating static charges. Accessory consists primarily of two concentric tubes and an aluminum rod and is clipped over the HI terminal electrode. Sensitivity can be varied over a wide range by raising or lowering the inner tube. In lowered position, the pointer is thrown off-scale from a 10-ft distance by a charged pocket comb. Made by **Keithley Instruments,** Dept. 206, 3870 Carnegie Ave., Cleveland 15, O.

For more details circle **NED-6544** on enclosed inquiry slip

SOUND METER has only two controls

Lightweight type 1555-A Sound-Survey meter can be used for measurement of machinery noise, deafness-risk surveys, and checking dynamic range and frequency response. Pocket-sized instrument weighs 1 lb 14 oz with batteries and can be mounted on a tripod. Only two controls are used. Total sound pressure level range of the meter is 40 to 136 decibels. Three frequency weighting networks are provided. Made by **General Radio Co.,** Massachusetts Ave. & Front St., Cambridge 39, Mass.

For more details circle **NED-6545** on enclosed inquiry slip

EXCEL No. 6 PAYS BOTH WAYS

TOOL & CUTTER GRINDING HEADQUARTERS in the smaller shop—

EXTRA SHARPENING SERVICE in the larger plant—

Builders of Precision Grinders for 78 Years

An outstanding value in price and performance! The Excel No. 6 Universal Cutter and Tool Grinder will accurately sharpen reamers and milling cutters in a wide variety of shapes and sizes. A full line of attachments is available for a multitude of applications including cylindrical and internal grinding. Base optional.

Swings work.....8" dia. x 16" long
Face mill capacity.....12" dia.
Table surface.....4" x 24"

PROMPT DELIVERY FOR DEFENSE

COVEL PRECISION GRINDERS
BENTON HARBOR — MICHIGAN

DRILL GRINDERS
CUTTER & TOOL GRINDERS
HYDRAULIC & HAND FEED SURFACE GRINDERS

Write for BULLETIN NE-72

For more details circle **NED-6546** on enclosed inquiry slip

Detailed photo and overall drawing of a recent Sta-Warm compound melter of 1,000 gal. capacity.

Large or Small

Sta-Warm BUILDS THEM ALL

From a half-pint wax dropper that is hand held, to the 1000 gal. rectangular compound melting tank above . . . and any size in between . . . Sta-Warm builds them all.

And all are built to the same "basic" specifications of wide distribution of low-wattage heat that melts material efficiently, fast, uniformly . . . without burning or carbonizing.

In the large tank shown, more than 17,000 ft. of resistance wire was wound into 4,450 ft. of heating element and this was evenly wound around entire side wall and bottom areas of this tank. The photo shows a workman making the last of 1000 terminal block connections so only the filled part of the tank will have heat applied to keep the compound melted.

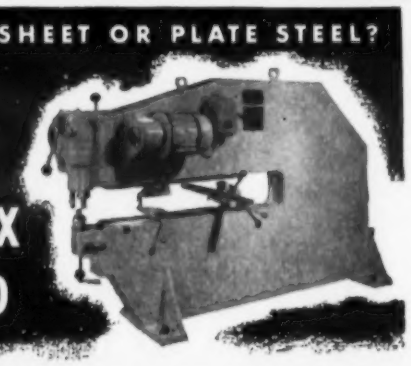
Do you need a thousand gallon tank . . . or a half-pint heater? Better write Sta-Warm *first.*

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle **NED-6547** on enclosed inquiry slip

WORKING SHEET OR PLATE STEEL?

LOOK at what PULLMAX CAN DO



STRAIGHT CUTTING Straight cutting, circle cutting, free hand cutting, slot cutting, beading, folding, louvering and many variations of these operations . . . ALL ON ONE PULLMAX MACHINE! Easy to set up and change tools . . . seven sizes of machines work materials up to 11/32" in mild steel . . . also works stainless steels, non-ferrous metals, wire mesh and plastics.

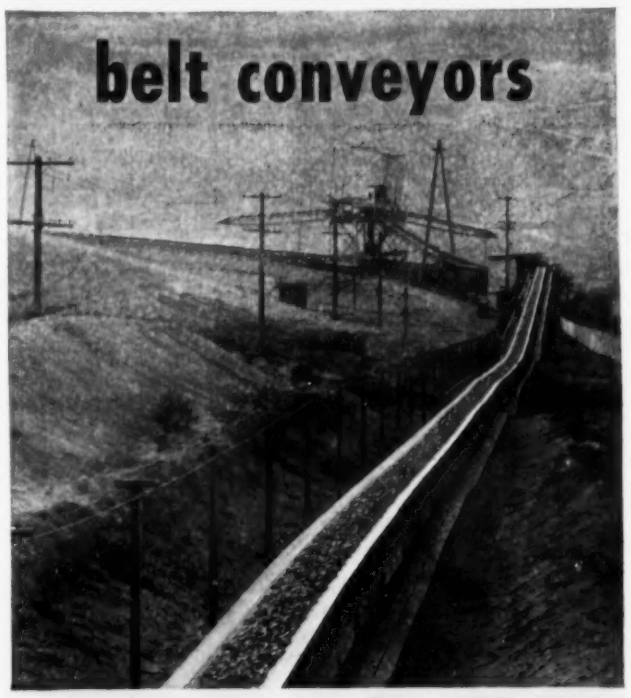
CIRCLE CUTTING **FOLDING** **SLOT CUTTING** **BEADING** **FREEHAND**

WRITE FOR LITERATURE

PULLMAX—A complete sheet and plate working shop in one machine.

AMERICAN PULLMAX CO., INC.
2457 N. SHEFFIELD AVENUE, CHICAGO 14, ILLINOIS

For more details circle **NED-6548** on enclosed inquiry slip



JEFFREY
ESTABLISHED 1877
THE JEFFREY MANUFACTURING CO.
952 Fourth St., Columbus 16, Ohio

For more details circle **NED-6549** on enclosed inquiry slip

VISUAL GRIND

Now a Veteran...

Tested, Proven Successful—

IN MANY PRODUCTION PLANTS!

Continuous inspection unites with blind, straight-through and templet grinding by projection during the grinding period. This complete speedy machine handles a wider range of work than ever before. Difficult jobs in steel and tungsten carbide which required several machines are dispatched with ease and profit on Visual-Grind. Tolerances and accuracy are progressively controlled by visual reference. A precision optic system gives trueness and definition. Husky construction insures rigidity and long life.

Ask for Bulletin N-7.

VISUAL GRIND THE CLEVELAND GRINDING MACHINE CO.

1643 EDDY ROAD • CLEVELAND 12, OHIO

For more details circle NED-6550 on enclosed inquiry slip

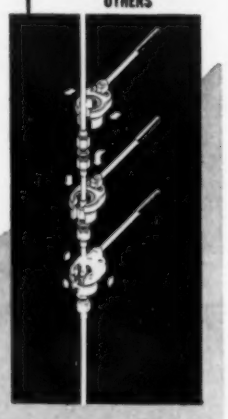
Volume-manufactured in two styles—the socket type and the Crowfoot type, TAC Open End Ratchet Wrenches are scoring phenomenal time and labor savings throughout all Industry.

It is a matter of record that heretofore no tool was made that could — *in a limit of 7° ratcheting arc* — successfully tighten or back off nuts or fittings on tubing or other standing center assemblies. The speed with which TAC can complete difficult wrenching jobs, in anybody's hands, is amazing.

Our plants are currently producing at capacity for all the Armed Forces and for Defense industries.

For Phenomenal Speed in These Wrenching Jobs

ELECTRICAL CONDUIT
HYDRAULIC LINES
LUBRICATION LINES
ENGINE FUEL LINES
PNEUMATIC LINES
REFRIGERATION
AIRCRAFT
RAILROAD EQUIPMENT
RIGGING EQUIPMENT
REFINERY EQUIPMENT
CHEMICAL LINES
AUTOMOTIVE EQUIPMENT
WATER AND GAS LINES
...AND DOZENS OF OTHERS



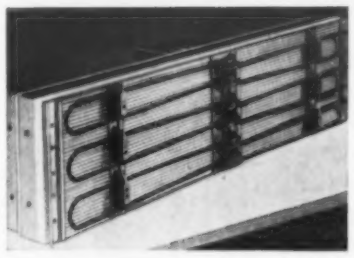
© 1952—TAC

TAC

TUBING APPLIANCE COMPANY
10321 ANZA AVENUE
Los Angeles, California

For more details circle NED-6551 on enclosed inquiry slip

INFRARED OVEN PANELS made in two sizes ready for erection and connection

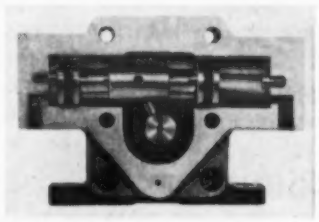


Two modular sizes of pre-engineered electric infrared ovens panels, made with built-in bus bars, insulation and frame, are supplied ready for erection in oven structure and connection to plant wiring. Units generate far-infrared which is absorbed with practically equal speed by all colors with negligible reflection. It is long wave length radiation that results in rapid heating and bringing work to temperature quickly, thus reducing oven and conveyor lengths.

Output of the panel can be varied from 4 to 100 per cent for temperatures up to 700° F. Two panel sizes are made: 1 x 4 ft, with 10.8 kw capacity; and 2 x 4 ft, with 21.6 kw capacity. Output is in excess of 9200 Btu per square foot per hour. Five-ply thermal insulation is incorporated. Air space between insulation layers can preheat air for other uses. Made by **Edwin L. Wiegand Co.,** 7509 Thomas Blvd., Pittsburgh 8, Pa.

For more details circle NED-6552 on enclosed inquiry slip

POWER OPERATED VALVE for remote or automatic applications requiring four-way control valving

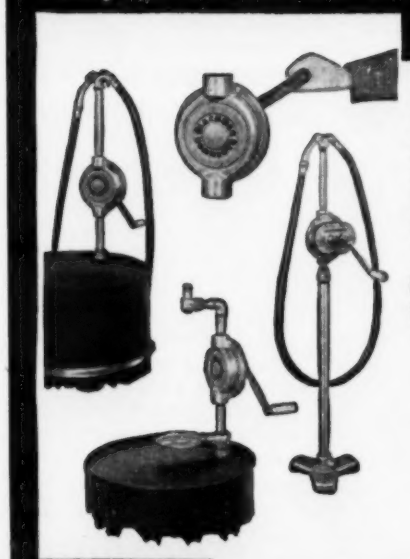


Suitable for air, oil or water operation with option of finger, cam, toe or solenoid pilot controls, POV power operated valves are available in six sizes. They are adaptable for such purposes as remote control where operation is some distance from valve, automatic operation where the movement of some part or mechanism must start the valve to create another movement, on reciprocating service where a cylinder moves continuously back and forth and in safety functions where failure of electric power or line pressure must reverse the valve.

Unit is essentially a standard four-way valve, but the rotation of a disk is accomplished by means of a piston. Latter is moved by operating fluid of main line and is controlled by small pilot valves suitably located and actuated. Applying pressure through the pilot on one end of piston forces it to move ahead and rotates the valve disk to the forward position. Applying pressure on the opposite end moves the piston back and rotates the disk to reverse position. Made by **Ledeen Mfg. Co.,** 1602 S. San Pedro St., Los Angeles 15, Calif.

For more details circle NED-6553 on enclosed inquiry slip

BLACKMER HAND PUMPS designed for *Liquid Materials Handling* IN YOUR PLANT



Speed liquid materials handling. Eliminate spillage. Promote safety. Cut costs. Blackmer builds the only complete line for industrial use.

MOUNT ON DRUMS, WALLS, MACHINES, WHEEL TANKS, SKID TANKS, UNDERGROUND STORAGE OR ON PIPELINES.

7 to 28 G.P.M.

For lube oils, solvents, paints, thinners, fuel oils, gasoline, cutting oils, soaps, and other liquids.

GET HAND PUMP DETAILS

Write for catalog folder "HP6" and price list.

BLACKMER PUMP COMPANY
1809 Century Ave., S.W. - Grand Rapids, Mich.

For more details circle NED-6554 on enclosed inquiry slip

CUT LOADING TIME! 1 DOCK HANDLES THE FREIGHT OF 3

ROWE ADJUST-A-DOCKS
Eliminate Costly Hand Loading

1. Brings dock to level of any truck bed.
2. Speeds loading by fork and lift truck directly into carriers.
3. Eliminates dock hazards.
4. Floats at truck level.
5. Sturdy hydraulic finger-tip control.
6. Pays for itself in 30 days.

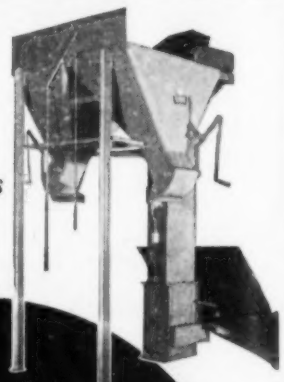
ADJUST-A-DOCK

LOOK into the SAVINGS you can make in freight handling with Rowe Adjust-A-Docks. WRITE FOR BULLETIN and complete information.

ROWE METHODS, INC.
2534-I DETROIT AVENUE • CLEVELAND 13, OHIO

For more details circle NED-6555 on enclosed inquiry slip

the HANDY SANDY *gives you 7 advantages* THAT MEAN LOWER COST SAND HANDLING FOR YOU



fits any foundry

1. Puts the Sand Pile Overhead
2. Eliminates Shoveling and Waste Motions for the Molder
3. Increases Molders' Output
4. Savings From First Unit Pay for the Next Unit
5. Improves Condition of Sand
6. Takes Little Space
7. Low Cost — Simple to Install

write for bulletin No. 205

NEWAYGO ENGINEERING COMPANY
NEWAYGO, MICHIGAN

For more details circle NED-6556 on enclosed inquiry slip

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

WATERLOO METAL BOXES AND CHESTS

Waterloo VALVE SPRING COMPRESSOR CO. WATERLOO, IOWA

For more details circle NED-6557 on enclosed inquiry slip

How many material handling jobs are you still doing the hard way? How many precious man hours, dollars and minutes are you spending to move materials from here to there?

Whether it's bags, boxes, barrels, bales or bulk . . . whether it's unloading, loading, transporting, lifting or lowering, chances are that a Lippmann Conveyor or combination of them will show substantial savings in time, men and money.

Lippmann is headquarters for all kinds of conveyors, and 28 years of manufacturing and application experience. Lippmann engineers are ready and eager to help you solve your material handling problems. A card or letter will bring prompt and sincere attention to your regular or special requirements.

LEW LIPPMANN ENGINEERING WORKS

4631 W. Mitchell St., Milwaukee 14, Wisconsin

For more details circle NED-6558 on enclosed inquiry slip

FOR MATERIAL HANDLING—

more and more—the swing is to wide-base pneumatic tires

GENERAL

INDUSTRIAL PNEUMATIC TIRES

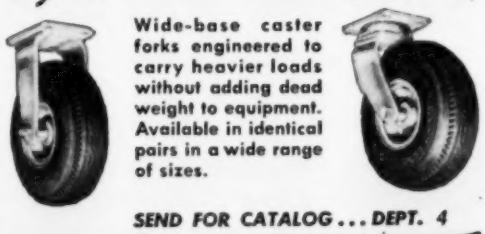
More Designers are specifying wide-base General Pneumatics. They know Generals add these extra selling points to handling equipment.

SAVE TIME · MONEY · LABOR

- MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS
- CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE
- SAVE HIGH COST FLOORS AND FLOOR SURFACES
- SLOW, EVEN WEAR FOR LONG SERVICE
- HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND
- ROLLS EASIER, SMOOTHER OVER ALL SURFACES

Available separately or in assemblies of Tires, Tubes and Wheels. Size O.D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

Rigid CASTER FORKS *Swivel*



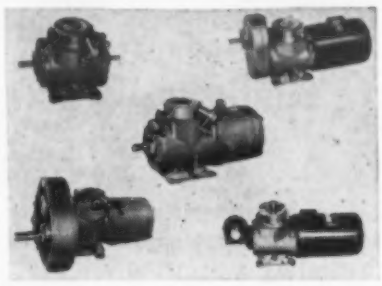
Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

SEND FOR CATALOG . . . DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, O.

For more details circle NED-6559 on enclosed inquiry slip

VARIABLE SPEED TRANSMISSION available with various types of control assemblies and reductions



Wide range of speed from any desired maximum to zero is possible with line of model 18 infinitely variable speed transmissions. These light-power units are designed for operation at 1800 rpm speed input without using auxiliary spring loading. It is possible to reset unit to desired speed accurately. Transmission can be stalled for prolonged periods of time without damage to machine or transmission.

Unit is shown with and without motor, and with standard output as well as with built-in worm reduction, single stage and double stage helical spur gear reduction units. Micrometer type dial-control handle can be supplied which permits precise speed selection. Single turn, lever, remote mechanical and remote electrical controls are also available.

Completely packaged as unit, drive, motor, reduction and control mounts on driven machine with only four bolts. Made by **Graham Transmissions Inc.**, 3753 N. Holton St., Milwaukee 12, Wis.

For more details circle NED-6560 on enclosed inquiry slip

SHEET HOLDING CLAMPS are made in five styles and facilitate welding and riveting

Five basic styles of clamps and applying tools are designed for holding sheet metal during fabricating operations such as riveting and welding. Each style is offered in sizes to accommodate thicknesses from 3/16 to 1½ in. and fit drill holes from 0.096 to 0.35-in. 3H Certified plunger seal clamps have spring enclosed and are recommended for use where material thickness is less than 3/16-in. Where greater thickness is encountered and more tension is required, the open-spring type is used. Three types of side grip clamps are made for material having accessible edges, but without drilled holes. The above three types of clamps are applied quickly, easily and safely with 3H safety pliers and safety gun.

Hand-operated clamp for bench work is applied without tool and is useful on template work. Wing nut clamp offers increased tension and handles greater thicknesses. Made by **Monogram Mfg. Co.**, 2208 Colorado St., Santa Monica, Calif.

For more details circle NED-6561 on enclosed inquiry slip

Make Your Glove Dollars Increase Production

PIONEER

Stanzoils®

PIONEER's new Stanzoil catalog shows you how to buy the right glove for each job at the lowest per hour cost. Price buying alone is false economy — no *one* glove is suitable for *all* uses. It pays to buy for utmost protection from injury *plus* hand and finger dexterity that mean faster work. New Stanzoil catalog gives you an easy method of efficient selection. *Pioneer recommendations are unbiased — we make all kinds of liquid-tight gloves,* all-neoprene, neoprene or plastic coated, 32 styles, weights, sizes, colors. Pleased workers and no work stoppages are vital these days — write today for this helpful catalog.

R-17 Extra-Duty Pioneer Stanzoil, red neoprene coated fabric, non-slip grip, curved fingers, preflex palm and inserted thumb design.

Industrial Glove Division

The PIONEER Rubber Company

634 Tiffin Road • Willard, Ohio

STANZOIL PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

For more details circle NED-6562 on enclosed inquiry slip

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- BUY DIRECT FACTORY
- ROPE REEVE, LINK TYPE
- WRITE FOR CATALOG

BUILDS BUCKETS FROM FOR LESS POWER WHEEL

INDUSTRIAL BROWNHOIST CORP.

BAY CITY, MICHIGAN

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WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

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OVER 9,000 ITEMS INCLUDING

THE HARRY ALTER CO.

1726 S. MICHIGAN AVE., CHICAGO 16

132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-6564 on enclosed inquiry slip

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FOR FASTENINGS THAT RESIST CORROSION

Here's a *bookful* of ready answers to your corrosion problems . . . the handy 56-page Harper Stock Book and Price List. It gives you information on all Harper Everlasting Fastenings—bolts, screws, nuts, washers, rivets and accessories in brass, bronze, copper, aluminum, stainless, Monel and other alloys—all products of America's leading manufacturer specializing in corrosion-resistant fastenings. Over 7000 items in stock and ready for delivery from warehouses and distributors, coast to coast!

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SPECIALISTS IN ALL NON-CORROSIVE METALS

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Company.....
Position.....
Address.....
City.....*Zone*....*State*.....

For more details circle NED-6565 on enclosed inquiry slip

IF YOU WORK WITH PLATE YOU NEED A STEELWELD PRESS

If you work with metal in any thickness from 12 gauge to one inch most likely a Steelweld Press would prove helpful and profitable to you.

Steelwelds are versatile tools that do bending, forming, drawing, punching, etc. quickly with simple, easily set dies.

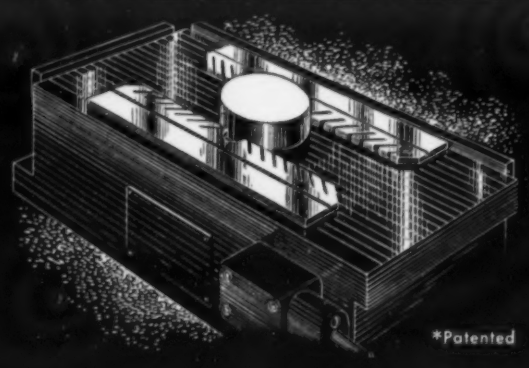
Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6638 East 281st St. Wickliffe, Ohio

STEELWELD PRESSES

For more details circle NED-6566 on enclosed inquiry slip

PLASTIC . . . MAGNESIUM . . . FIBRE
MONEL METAL . . . HARD RUBBER
. . . other rigid non-magnetic materials
CAN BE HELD ON MAGNETIC CHUCKS!



Magna-Vise* MAKES IT SIMPLE!

Get full details on this revolutionary shop-proved device . . . write Dept. ND-72

Hanchett MAGNA-LOCK CORPORATION
Magna-Lock
Magnetic Chucks and Devices
BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-6567 on enclosed inquiry slip

FREE Repair Handbook

Here are a few of the many Smooth-On repairs for plant, shop, and home found in this pocket-sized handbook:

- Sealing cracks and leaks in pumps, heaters, apparatus, piping.
- Tightening loose parts of apparatus, fixtures, tools.
- Stopping leaks in basement walls.
- Repairing cracked concrete floors.

Write for your free copy of the Smooth-On repair handbook today. The simple directions and clear pictures will help you to make hundreds of time-saving, money-saving repairs.

ONE OF THE TEN SMOOTH-ON REPAIR CEMENTS

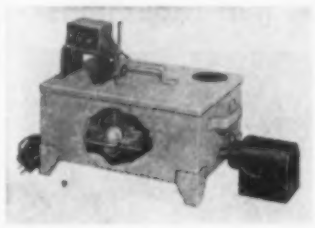
Smooth-On No. 1, used on iron, steel, brass, and other metals, is a quick hardening repair cement that comes in 7 oz., 1 lb., 5 lb., 20 lb., 100 lb., and larger sizes. If your supply house hasn't it, write us.

SMOOTH-ON SO.369

Smooth-On Mfg. Co., Dept. 10, 570 Communipaw Ave., Jersey City 4, N.J.
Please send me FREE Repair Handbook.
Name.....
Address.....
City..... *State*.....

For more details circle NED-6568 on enclosed inquiry slip

CONDENSATE RETURN UNIT consists of tank, pump and controls



Powerful enough to handle up to 450 gph at 2-ft head to 168 gph at 8-ft head, automatic condensate unit consists of 5-gal tank, 1/35-hp centrifugal pump, copper float operated Micro Switch and 6-ft cord and plug for 110-v line. Unit is portable and can be connected to system with 3/8-in. pipe, 5/8-in. rubber tubing or standard water hose. Synthetic rubber impeller is nonclogging. Made by **Samuel S. Gelber Co.**, Dept. ED, 162 N. Clinton St., Chicago 6, Ill.

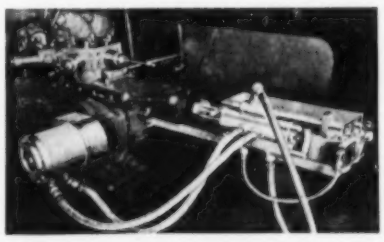
For more details circle NED-6569 on enclosed inquiry slip

VERNIER CALIPER slide is equipped with friction lock

Swedish made Eskilstuna vernier caliper can measure external, internal and depth dimensions, including core diameters of threads in fractions or decimals of inches. Tool is made of hardened and ground tool steel and has jaws lapped parallel. Smooth fitted slide is equipped with friction lock for ease of operation. Overall dimensions are 3 x 8 in.; scale is 6 in. long; and jaws are 1 9/16 in. deep. A leather case to protect caliper is available. Distributed by **Master Rule Mfg. Co.**, 42 Mulberry St., Middletown, N. Y.

For more details circle NED-6570 on enclosed inquiry slip

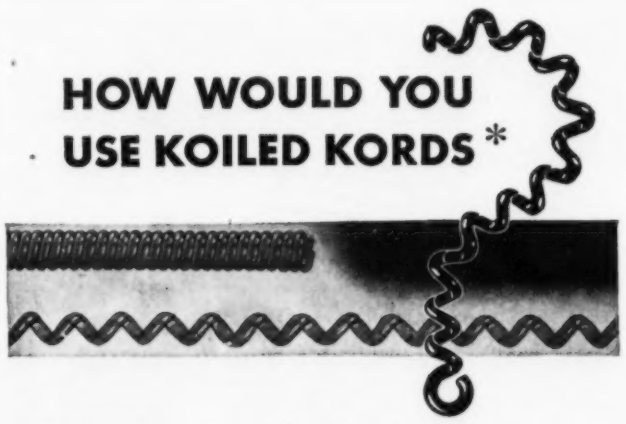
LATHE TURRET ACTUATOR for standard ram-type turret



Any standard ram-type turret lathe with up to six-station turret and with bar stock capacity up to 2½ in. can be powered by this hydraulic drive. It provides continuous or interrupted cycle to speed short or long run work. Its ¾-hp motor, two pumps and reservoir fit under end of machine, and fluid motor attaches to turret pilot-wheel shaft. Small, compact control body mounts on end of turret. Entire assembly requires no additional floor space. Individual cycles for each of six positions can be set for rapid approach, dwell, infinite adjustable feed and quick return. Cycle is started with hand lever, and stop is automatic after any series of operations. Made by **Viking Industries**, Dept. J, 220 Montague St., Rockford, Ill.

For more details circle NED-6571 on enclosed inquiry slip

HOW WOULD YOU USE KOILED KORDS*



Koiled Kords are retractile electric cords that extend to approximately five times their coiled length and retract to their original shape and size.

Koiled Kords are made under a patented process that eliminates sagging or bagginess — the coil is always tight when retracted, yet it extends easily to its full length. Koiled Kords have innumerable uses in communications, home and industry — **HOW WOULD YOU USE THEM?** *trade mark

Write on your business stationery for a sample of Koiled Kords.

Koiled Kords INCORPORATED
BOX K, HAMDEN, CONNECTICUT
IN CANADA: R. D. FLECK & CO., LTD., OSHAWA, ONTARIO

For more details circle NED-6572 on enclosed inquiry slip

NOW EVEN MORE POWER EVEN LESS COST with REPUBLIC TRANSMISSION BELTING

- Get that added power for increased production with Republic Rubber's flexible, pre-stretched Transmission Belting.

Built with heavy, hard-woven, rubber-impregnated fabrics, with square or sealed edges and non-slip friction surfaces, Republic Belts are adaptable for duty on heavy industrial drives subject to shocks and stresses and on drives operating at high speeds over small pulleys.

Republic Transmission Belts are free from fastener trouble. They're pre-tested under job conditions to assure most efficient power delivery at lowest possible costs.

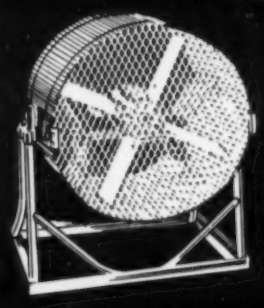
- Contact your local Republic Distributor or write direct for full facts.

INDUSTRIAL RUBBER PRODUCTS BY
REPUBLIC RUBBER DIVISION
Lee Rubber & Tire Corporation
YOUNGSTOWN, OHIO

For more details circle NED-6573 on enclosed inquiry slip

CONTINUOUS AIR CHANGE | REDUCES FATIGUE UPS PRODUCTION

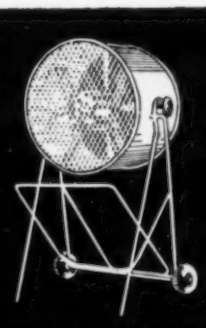
LEADERS OF INDUSTRY KNOW A COMFORTABLE WORKER IS A PRODUCTIVE WORKER



UTILITY MAN COOLER
Utility Man Cooler
Rugged Construction
Airfoil Designed

Industrial air's utility man cooler is your answer to any JOB need. Sizes up to 72" in diameter and from 1000 to 100,000 C.F.M. Also to your specifications. Propeller features high tensile strength cast aluminum blades.

Industrial Air's Portable Man Cooler fills every job requirement. Sizes up to 72" in diameter and from 1000 to 100,000 C. F. M. Its rugged construction, light weight and high output make it the perfect fan for welcome relief from heat in foundry, mill and factory. Propeller is well guarded, and the pitch adjustable.



PORTABLE MAN COOLER
Portable Man Cooler
Light Weight
High Tensile Strength
Cast Aluminum Propeller Blades.

Duct Fans
Direct or Belt Driven
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Roof Ventilators
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INDUSTRIAL AIR
Represented in All Principal Cities
Write Dept. 701 for Catalog of Complete Line

THE HARVEY P. BERTRAM CO.
1008 W. Ninth St. Cincinnati, Ohio

For more details circle NED-6574 on enclosed inquiry slip

Where space is a problem . . .

GOULDS "Close-Cupld"

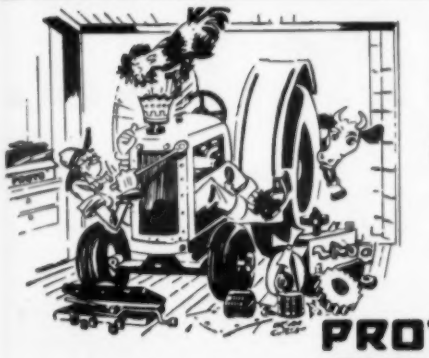
Centrifugal Pump is the answer

If you're looking for dependable, 24-hour-a-day pumping efficiency, yet are limited in space—you will find the Goulds Fig. 3650 "Close-Cupld" centrifugal pump ideal. This versatile, adaptable pump is a self-contained unit. It needs no space-consuming special foundations. There's no necessity for an unwieldly base plate to support pump and motor. This compact design also assures quick, easy installation—cutting costly labor time.

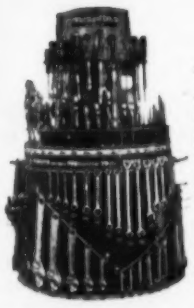
The Goulds Fig. 3650 is available in 17 sizes, with capacities up to 2000 G.P.M. Heads up to 400 ft. For complete information, call your Goulds representative, or send for Bulletin 710.1.

Goulds PUMPS INC. Seneca Falls New York

For more details circle **NED-6575** on enclosed inquiry slip



They Know Where e'er King Tractor Rules . . . that PROTO means PROfessional TOols!



There are several reasons why *all* tool experts prefer PROTO *professional* tools. User-tested designs provide strength, lightness and ease of handling. PROTO-specified alloy steels, properly forged and heat treated, insure extra life. Modern manufacturing produces accurate tools for fast, safe use. And the guarantee protects buyers. Choose the *professional* tools you need from the complete line at your PROTO dealer's store. Send 10¢ for 68-page catalog to

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2275S Santa Fe Ave.,
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Wrenches · Pliers
Screwdrivers · Punches
Chisels · Sockets · Handles
Industrial Tools
Many Others.

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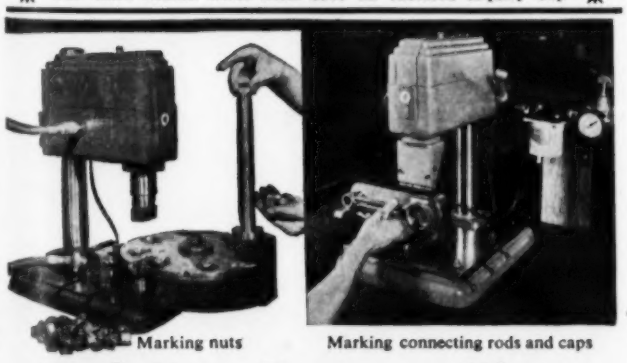
PROTO TOOLS LOS ANGELES

Eastern Factory—Jamestown, N.Y.

For more details circle **NED-6576** on enclosed inquiry slip



Marking nuts — Marking connecting rods and caps

Mark More Parts per Minute

Whether your problem is the marking of nuts, bolts, connecting rods, axles, pots and pans or the branding of screw drivers, pencils, baseballs or ammunition belts—it will pay you to investigate the Automark. This automatic high-speed pneumatic marking machine needs no special jigs or fixtures for average work. Where holding devices are required several standard automatic fixtures are available. We'll gladly design and build special equipment. Write for Bulletin 712.

NEW Electric Typewriter marks metal name plates in one-fifth the time.

AUTOMARK
Automatic Marking MACHINE
Manufactured Exclusively By

AGENTS
Desirable territories open for responsible representatives. Write giving complete information, lines carried and territory covered.

DEFIANCE MACHINE & TOOL COMPANY
1928 South Vandeventer Ave. • St. Louis 10, Mo.

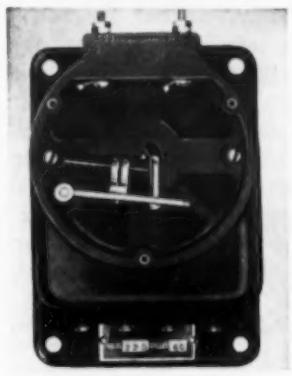
For more details circle **NED-6577** on enclosed inquiry slip

PLASTIC REINFORCED WORK GLOVE
dots add to wear and gripping power

Savings of 40 per cent are reported for Plastic-Dot work gloves over conventional canton flannel gloves. Plastic dots set permanently into 10-oz canton flannel almost double their wear. Gloves feature knitted wrists and sturdy construction. List price is $3.15 per dozen pairs. Made by **Riegel Textile Corp.**, 258 Madison Ave., New York 16, N. Y.

For more details circle **NED-6578** on enclosed inquiry slip

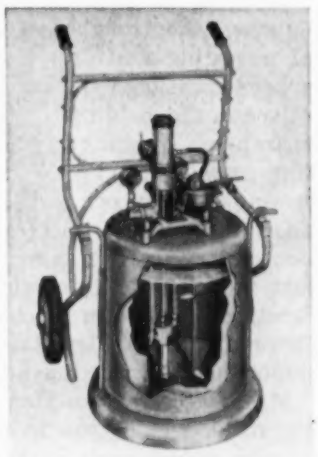
PHASE SEQUENCE RELAY
operates on 2 or 3-phase ac



Compact and substantially constructed for intermediate or continuous service, phase sequence relay offers positive phase protection to polyphase rotating machinery which might be damaged by reverse phase sequence, low or single phase voltage. Relay consumes 5 w per phase, will operate on either two or three-phase ac and is made for all voltages and frequencies ordinarily encountered. Made by **Shepard Elevator Co.**, 5020 Brotherton Rd., Cincinnati 9, O.

For more details circle **NED-6579** on enclosed inquiry slip

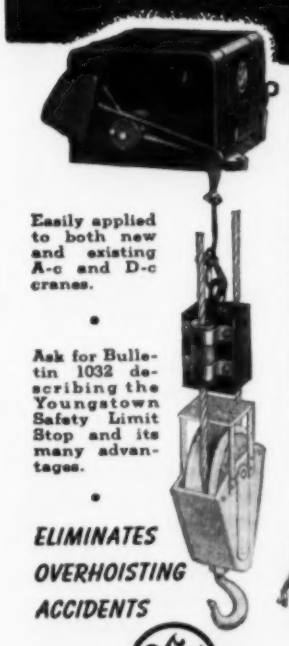
PAINT SUPPLY PUMP
for spraying from 5 and 10-gal cans



Paint can be sprayed directly from the original 5 or 10-gallon containers by using portable heavy duty Paintmaster spray gun supply pump. Air-operated, double-action reciprocating pump is mounted on a Sta-Level hand truck which has large rubber-tired wheels. It can be disengaged from the truck. An air-operated agitator keeps paint mixed independently of paint pump operation. Blades are adjustable to any depth. Pump can handle abrasive type materials and vinyl and plastic base coatings. A 10-gallon liner container is provided for special mixing. Made by **Gray Co.**, 1012 Sibley St., Minneapolis 13, Minn.

For more details circle **NED-6580** on enclosed inquiry slip

Safety LIMIT STOPS for A-c and D-c Cranes by EC&M



Easily applied to both new and existing A-c and D-c cranes.

•

Ask for Bulletin 1032 describing the Youngstown Safety Limit Stop and its many advantages.

•

ELIMINATES OVERHOISTING ACCIDENTS

Not only disconnects the motor from the line, but stops the motor quickly. On D-c cranes, where high hoisting speeds prevail, dynamic braking aids in bringing the hook block to rest. These Limit Stops are operated directly by the hook block, hence stretching of the hoisting cables does not affect the tripping point.

By removing the fear of an overhoisting accident, the YOUNGSTOWN Limit Stop enables the crane operator to do better work.

High interrupting capacity—Two normally open and two normally closed contacts, mechanically interlocked and with wide, vertical opening, always assure positive interruption of the hoist motor current.

EC&M

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

For more details circle **NED-6581** on enclosed inquiry slip

Now . . . a Flexible High-temperature Tubing . . .
IRVINGTON Silicone Rubber-coated Fiberglas

If you need a flexible insulating tubing that meets all NEMA Class "H" requirements for high-temperature service, look into this new Irvington product!

Silicone *Rubber*-Coated Fiberglas* Tubing *retains* all the advantages of silicone *resin*-coated products—and adds the desirable feature of extreme flexibility.

Get the full facts—write for technical data sheet.

*T.M. Reg. U. S. Pat. Off. by Owens-Corning Fiberglas Corp.

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON VARNISH & INSULATOR COMPANY
14 Argyle Terrace, Irvington 11, N. J.

Plants: Irvington, New Jersey; El Monte, California; Hamilton, Ont., Canada

For more details circle **NED-6582** on enclosed inquiry slip

With new CROWN Rubber-Bonded Abrasive Wheels, one wheel handles a wide variety of finishing jobs—often in one operation instead of four—with time savings up to 50%.

CROWN Rubber-Bonded Wheels convert slow hand operations into efficient, machine production. No need for special low-speed grinders. *Top-quality CROWN Wheels are rated for use at full 3600 rpm or 5400 surface feet per minute.*

Combines Action of Rubber PLUS Abrasive

In CROWN Wheels you get the cushioning and cleaning action of rubber *plus* the effective action of a continuously sharp grained abrasive. They give an excellent buff or semi-buff finish without materially changing dimensions. Easily shaped to contour—work safely to close tolerances. No special preparation or dressings are needed.

FOR JOBS LIKE THESE:

REMOVE
Light digs, cuts, scratches, tool and heat marks, rust, burrs, beading... flash from rubber molded products.
POLISH
Blanking dies, all kinds and shapes of metal—plastics.
CLEAN
Welds and solder joints — Remove film, oxidation, discoloration.
FINISH
Dies and precision tools.
SURFACE GRIND
Small stamped parts and other light work.

ORDER TODAY

WHEEL SIZE	PRICE
4" x 1/2"	$2.65
4" x 3/4"	2.85
5" x 1/2"	3.00
5" x 3/4"	3.60
6" x 1/2"	3.75
6" x 3/4"	4.25

Discount on purchase of $20.00 or more.
(Please specify arbor size).
Also available in sticks and strips.
ALL PRICES F.O.B. SYCAMORE.

CROWN INDUSTRIAL PRODUCTS CO.
406 Borden Avenue, Sycamore, Ill.

Please send us _____ (quantity) CROWN Wheels, _____"x_____" (give size wanted). Our arbor size is _____

NAME _____
COMPANY _____
Our Purchase Order No. _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

For more details circle **NED-6583** on enclosed inquiry slip

BETTER SEEING TOOLS FOR INDUSTRY

FOSTORIA LOCALITES INCREASE WORKERS' EFFICIENCY

Light the Vital Seeing Zone on Machine Tools, Inspection and Assembly Benches

MODEL 3267-H-174

$6.12 EACH in pkg. of 6 Single Units $7.65 ea.

Overall length 32¾". Three instantly adjustable joints. Flat oblong base for machine screw mounting.

- **Rugged Construction** withstands vibration and rough handling
- **Instantly Adjustable** with flexible ball and socket joints
- **Baked Enamel Finish** — Exterior, Smooth Gray — Reflector Interior high temperature White
- **Reflector** accommodates 100 watt or any A-19 or A-21 medium screw base lamp
- **Wired Complete** with switch socket and 8 ft. oil resistant cord and moulded plug

WRITE FOR COMPLETE CATALOG of Localite models with various type reflectors, arms and bases for every industrial use.

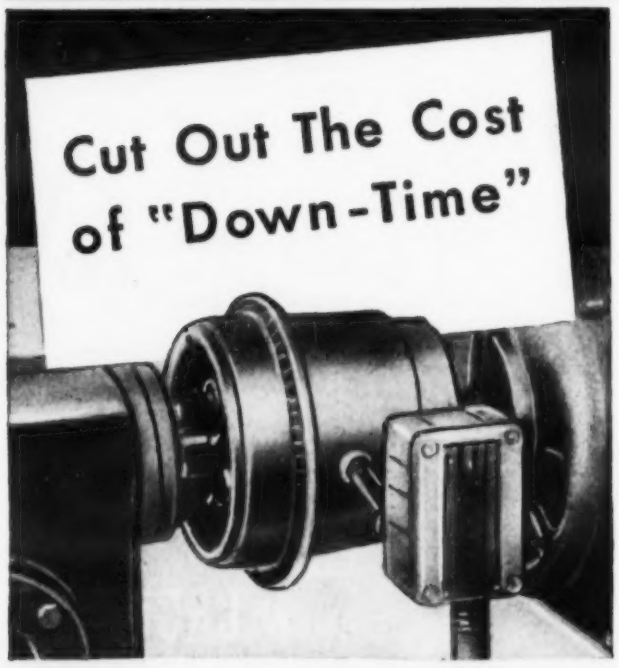
LOCALITE fostoria for Light ON the Job

THE FOSTORIA PRESSED STEEL CORPORATION FOSTORIA, OHIO

Localites are available through electrical wholesalers everywhere.

For more details circle NED-6584 on enclosed inquiry slip

Cut Out The Cost of "Down-Time"



Anchor-Waldron Overload Cut-Outs

Automatic shut-off and reset. Save time lost by sheared drive pins.

A positive mechanical, electrical and completely controlled device that instantly shuts off the motor when an overload occurs and then resets itself automatically. With overload removed, you simply push a starter button. Protects horsepower—saves time, money and maintenance work. Siren or light signals can be installed to give ample warning of a build up in load. Available in flexible coupling type for direct connected drives—in pulley type for belt and chain drives. Easily adapted for a wide variation of horsepower.

Our new catalog 51 gives full information and engineering data. Write for your copy.

Also WALDRON Gear Type and Francke Pin Type Couplings. Catalogs on request.

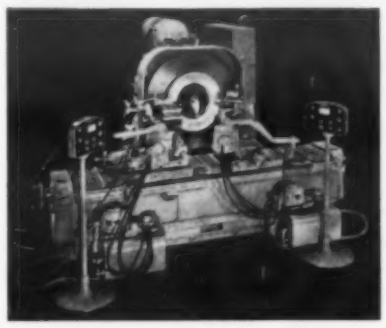
JOHN WALDRON CORP.

NEW BRUNSWICK NEW JERSEY

Sales Representatives in Principal Cities

For more details circle NED-6585 on enclosed inquiry slip

RIGHT ANGLE LATHE with right and left angular slides which can be tracer controlled

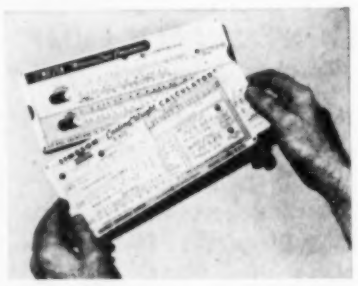


Two 60-in. right angle lathes, developed for machining jet engine rings, vanes, disks, wheels and other components, have right and left power angular slides to which are added air gage tracer units for control of inside and outside diameter or face contouring operations. Model F lathe is a constant surface cutting speed machine so designed that the tool can operate on both sides of center for finish facing.

Model O has a 16-speed, helical-geared headstock and two slides, one for the turning operation and the other for boring. One slide always is and the other can be tracer controlled. Both machines take either a 40 or 52-in. face plate with suitable splash guards. Work up to 60 in. diameter can be swung in the gap as long as its thickness, or the combined thickness of work and holding fixture, does not exceed 14 in. Air or manually operated chucks can be used. Made by **Monarch Machine Tool Co.**, Oak St., Sidney, O.

For more details circle NED-6586 on enclosed inquiry slip

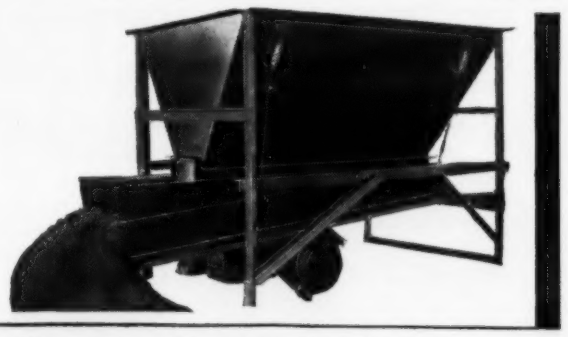
CALCULATORS give molding cost and casting weight data



Operating on the slide rule principle, two calculators are offered as an aid in figuring the weight of a casting and an approximate cost involved in the molding operation. Weight of ring and flat type casting is given per inch in pounds, taking into consideration inside diameters from 0 to 60 in. and outside diameters from 0 to 80 in. Flats and triangles take into consideration width, thickness and altitude. Relative weight for above shapes is multiplied by factor given on calculator for various materials, including metals, wood, sand, clay and brick.

Molding cost calculator uses number of castings per mold, weight per mold and weight per casting to give approximate cost and weight per mold and cost per 100 lb. It also computes castings per mold, total molds required, pounds of metal required, volume of mold and other data. Available free of charge from **National Engineering Co.**, Dept. NED, 549 W. Washington Blvd., Chicago 6, Ill.

For more details circle NED-6587 on enclosed inquiry slip



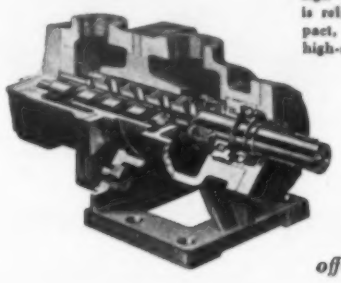
If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

For more details circle NED-6588 on enclosed inquiry slip

Newest IMO pump – Greatest Savings



Note simplicity of unique IMO design—only three moving parts. IMO is reliable, quiet, pulsation-free, compact, excellent for direct-connected high-speed operation.

DE LAVAL *offers immediate delivery of new IMO pump Write today*

This newest De Laval IMO pump—Model A313B—can be used profitably on a wide variety of hydraulic applications for higher pressures. Quantity-produced to help trim your costs, the new IMO saves you up to 40% in initial cost over other IMO models for pressures up to 275 psi. In addition, this quality-designed rotary positive displacement pump gives you all the low-maintenance advantages of the famous IMO pumping principle.

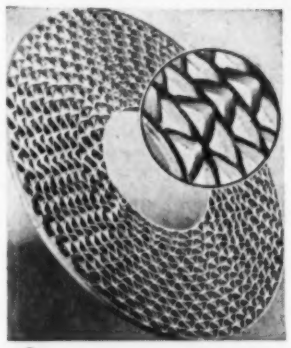
Put the new De Laval IMO A313B pump to work handling light or viscous fluids in hydraulic systems, rotary and steam atomizing oil burners, lubrication, governing systems and similar services. Specify it for capacities to 80 gpm, pressures to 275 psi, intermittent pressures to 325 psi.

DE LAVAL *IMO Pumps*

DE LAVAL STEAM TURBINE COMPANY *Trenton 2, New Jersey* DL 147A

For more details circle NED-6589 on enclosed inquiry slip

thinking of PM* ?



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Here's one of a stack of strongly magnetized grids, the hard-working heart of a FRANTZ FERROFILTER. These grids comb and re-comb iron and steel chips and particles out of coolants and cutting oils; lubricating and hydraulic oils. This gives your cutting tools longer life — higher output between grinds. It reduces abrasion of pumps, valves, gears, bearings and other surfaces subject to wear in your production equipment.

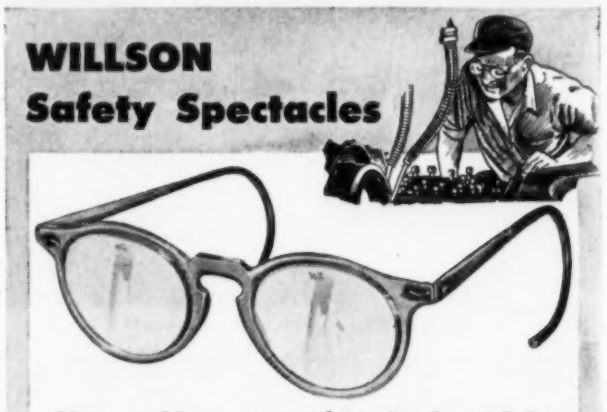
Send for BULLETIN 56 for application and installation data; types and sizes of these permanent magnet separators.

S. G. Frantz Co., Inc. P. O. Box 1138 Trenton 6, N. J.

Manufacturers of Permanent Magnet and Electromagnetic Separators

For more details circle NED-6590 on enclosed inquiry slip

WILLSON Safety Spectacles



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Popular WK Plastic Frame Style with

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- Hi-Line, half-plastic cable temples
- Non-flammable, sheet stock plastic frame
- Two lens sizes, four bridge sizes

*Reg. U. S. Pat. Off.

More than 300 other Eye and Respiratory Safety Devices carry this trademark

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WILLSON PRODUCTS, INC., 219 Washington St., Reading, Pa.

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WAR SURPLUS SAVINGS

Stationary or Portable ARC WELDER 97.50

Delivers 300 Amps., continuous — or 350 to 400 Amps., intermittent: Designed to weld continuously for hours . . . This unit is built around a rugged, heavy duty, aircraft type generator and comes complete with pulley reactor, output controls, switches and a rheostat mounted on sturdy steel frame. Operates on 15 H.P. for maximum output. Gas or electric motor. For light or heavy industrial work.

HYDRAULIC PUMP & CYLINDER SPECIALS

Hyd. Variable Displacement PUMP Will deliver maximum volume at any pressure setting between 600 and 900 P.S.I. Pump housing serves as reservoir for system. Has built-in compressed air supercharger which makes system independent of outside atmospheric pressure. Rotation is left hand only. Maximum speed for continuous duty is 3750 R.P.M. Displacement is .484 cu. in. per revolution, or approximately 4 G.P.M. at 1750 R.P.M. 32.50

Special! HYDRAULIC CYLINDER Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for road-forts — shop machinery, etc.' 29.95

P-3 STRATO POWER PUMP With built-in variable flow control valve in head. Positive displacement piston type. Displacement capacity: 2 gal. per min. at 1500 RPM at 1250 PSI. Pressure limit 1250 PSI continuous. 1400 PSI for 15 sec. Operates at 3750 RPM, intermittent max. 4500 RPM. Rotates either direction without adjustment . . 19.50

No. 1 HYDRAULIC CYLINDER Double action. Bore is 1" — Shaft ½". Has stroke of 2½" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8½". Will take 1500 lbs. continuous duty. 3000 lbs. intermittent. Will lift or push up to 1100 lbs. 5.75

P-4 VICKERS ANGLE PUMP Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI., continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum, 4500 RPM. Rotates to the right only 19.49

FOUR WAY VALVE Poppet type. Pressure balanced. Off at neutral position. Piston type with built-in relief valves for limit of cylinder strokes. 5/8" AN tube size (7/8"-14 thread) inlet & outlet Ports to cylinder are 1/2" AN tube size 3/4"-16 thread). 9.75

PALLEY SUPPLY CO. DEPT. NED-7 2263 E. Vernon Ave., Los Angeles 58, Calif.

Order from this ad. All sales final. All prices F.O.B., Glendale. Pay by M.O. or check. P.O.'s accepted from D.&B. firms. ½ deposit with C.O.D.'s.

For more details circle NED-6592 on enclosed inquiry slip

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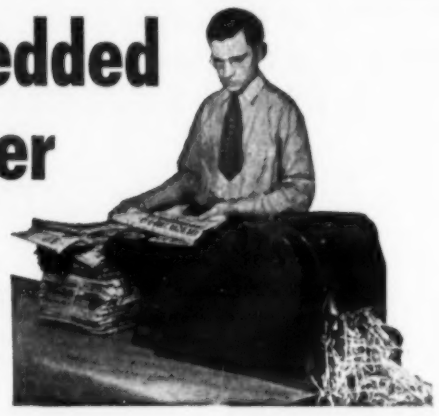

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Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

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For more details circle NED-6593 on enclosed inquiry slip

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- Faster Cooling
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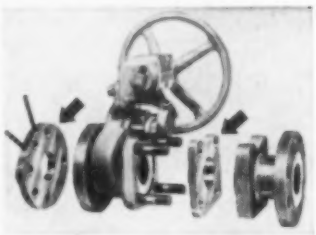
Koppers Aeromaster Fans give you faster cooling and longer life . . . they're an adaptation of high-speed top-efficiency aircraft propellers. And Aeromaster's high efficiency *cuts power costs up to 10%* . . . helps fan pay for itself. Aeromaster Fans are available for every industrial cooling requirement. Standard models up to 750,000 c.f.m. Engineering service for special installations. Sales Engineers available in all principal cities. Write today for details to: KOPPERS COMPANY, INC., *Aeromaster Fans*, 287 Scott St., Baltimore 3, Maryland.

KOPPERS

For more details circle NED-6594 on enclosed inquiry slip

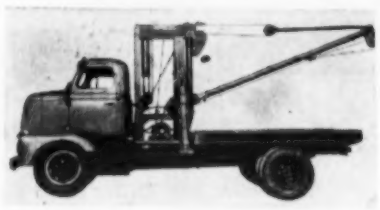
ELECTRICALLY HEATED VALVES are clear of frost at —110° F



Valve mechanisms in liquid carbon dioxide lines remain clear of frost and ice at temperatures as low as −110° F, using these electrically heated valves. Right arrow in illustration shows heating element required in single-disk valve, while double-disk units are equipped with both elements as shown. Heat is transmitted directly to valve seats to heat operating mechanism as well as entire flow opening. Valve sizes from 2 to 6 in. are available with pneumatic, hydraulic, solenoid or manual control. Heating elements can be provided for either 110 or 220-v operation, with inputs ranging from 400 to 3000 w per unit. Made by **Okadee Co.**, 332-A S. Michigan Ave., Chicago 4, Ill.

For more details circle NED-6595 on enclosed inquiry slip

HYDRAULIC TRUCK CRANE has load line capacity of 6400 lb and boom that extends 12 to 22 ft



Mounting on frame of any truck 1½ tons or larger, model B Hydra-Lift crane with hydraulically-powered boom requires only 40 in. behind truck cab, has loadline capacity of 6400 lb and swinging boom which telescopes from 12 to 17 to 22 ft. Safety margin on crane has been increased over that of earlier models by raising about 18 in. the point on crane's mast where topping cable is anchored. This gives a wider angle between boom and topping cable for greater lifting advantage.

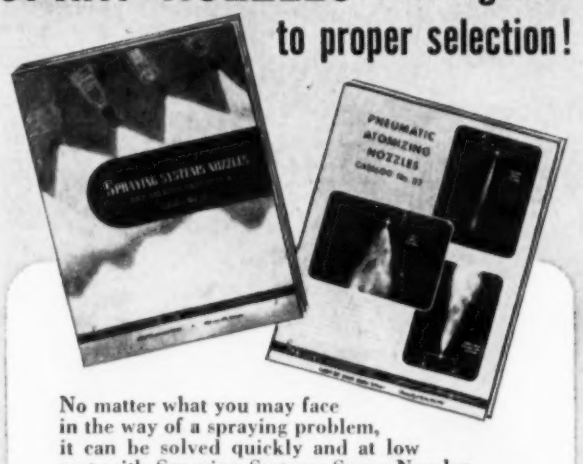
A bail bar has also been added to strengthen topping cable rigging, and a swivel boom-tip casting replaces hammer-head type to allow crane's use in closer quarters. Controls are lever instead of push-pull type, and special controls for operating lift outside of truck cab are available. Made by **Pitman Mfg. Co.**, 300 W. 79th Terrace, Kansas City 5, Mo.

For more details circle NED-6596 on enclosed inquiry slip

DO YOU KNOW? Objectionable smoke that plagues hot forging operations can be minimized by using a forging lubricant blended with colloidal graphite, according to a recent experience of the Columbus Auto Parts Co. In addition to improving employee relations by eliminating a nuisance, this procedure resulted in improved tool life. Colloidal graphite is made by Acheson Colloids Co., Port Huron, Mich.

For more details circle NED-6597 on enclosed inquiry slip

SPRAY NOZZLES... two guides to proper selection!



No matter what you may face in the way of a spraying problem, it can be solved quickly and at low cost with Spraying Systems Spray Nozzles. Two fact-packed catalogs—No. 22, General Industrial Spray Nozzles, and No. 23, Pneumatic Atomizing Nozzles—are yours for the asking. They show you all the various types of spray nozzles available . . . explain design and construction . . . and outline spray characteristics such as atomization, impact of spray and capacity. Write for your copies today.

SPRAYING SYSTEMS CO.
ENGINEERS AND MANUFACTURERS
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WRITE FOR CATALOGS NO. 22 AND NO. 23

For more details circle NED-6598 on enclosed inquiry slip

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Write for Complete Information

FLIGHTEX FABRICS, Inc.
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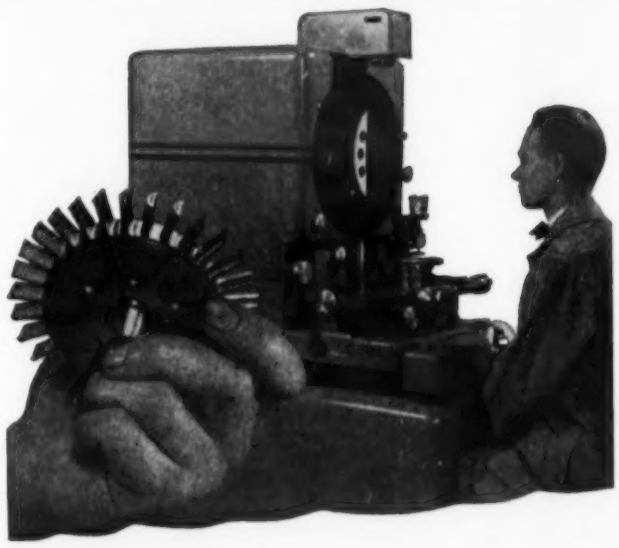

FOR RAPID, ACCURATE INSPECTION of difficult shapes

If you've been thinking of inspection by optical comparison only in terms of silhouetting simple parts, you may be overlooking a chance to lower your inspection costs, speed the work.

For example, with the Kodak Contour Projector, there's a trick made possible by the unique Surface Illuminator. To inspect the above impeller that goes into a jet engine component, Eclipse-Pioneer Division of Bendix Aviation Corporation projects the end of a blade by light directed straight on it *out of the same lens that picks up the image.* Conventional shadow projection just wouldn't do it.

In measuring this part, the two micrometers used operate independently of the elevating and cross-travel screws to eliminate strain and wear. They are provided with dial pressure indicators—there's no "micrometer feel" required. The operator works unhampered by hoods or curtains, needs little training to get the work out in a hurry.

If your need is for toolroom measurement, the Kodak Contour Projector, Model 2A, is your choice. If your need is for fast production inspection, the economical, stripped-down Model 3 will meet your requirements. There is a field engineer in your area who will be glad to discuss your requirements with you. No obligation, of course. Just write to Eastman Kodak Company, Industrial Optical Sales Division, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Optical Gaging

A new sound movie shows how to simplify complex inspection problems. We'll tell you how to get it for a showing.

Kodak TRADE-MARK

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Special cold headed products

. . . nails • rivets • screws . . . made to order

. . . and to your specifications in any metal. Large raw material inventory for your convenience. Send drawing—advise quantity. *Free catalog on request.*

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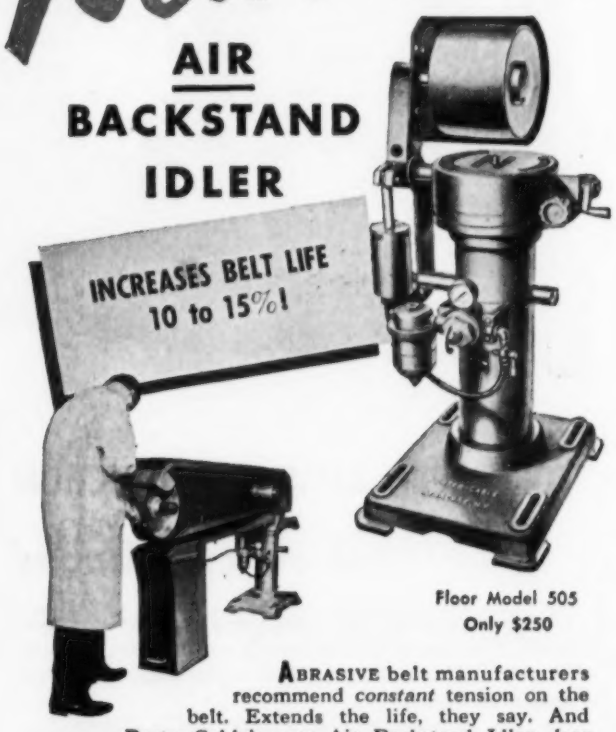
For more details circle **NED-6601** on enclosed inquiry slip

New! Porter-Cable

AIR BACKSTAND IDLER



Floor Model 505
Only $250

ABRASIVE belt manufacturers recommend *constant* tension on the belt. Extends the life, they say. And Porter-Cable's new Air Backstand Idler *does* increase belt life. Months of factory testing—on high-production grinding and polishing operations—conclusively prove Porter-Cable's *constant air tensioning* makes the belt last 10 to 15% longer!

Less Time Lost

Belt changes and tension regulations are quick and easy. The desired tension is obtained by the turn of an accessible air valve. Once set, the tension is maintained *constantly;* no fussing with adjustments again and again. And there's no time-consuming alignment when initial installing is done. Hold-down bolt holes in the base are slotted. So there's plenty of leeway to jockey the unit to *exactly* the right distance from the contact wheel. Tracking adjustments may be made in a few seconds . . . from operating position if desired.

Choice of Two Models

Model 505, with floor pedestal, and Model 510, with wall mounting, are immediately available. Prompt delivery through your Porter-Cable dealer. More information? Sure—mail the coupon today!

• *VALUABLE BOOKLET—JUST ISSUED!*

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Please send your free "Case Histories" booklet showing production increases and economies with abrasive belt machining . . . also full information on your new Air Backstand Idlers and name of nearest dealer.

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Pioneer Manufacturers of Abrasive Belt Machines
In Canada write: Strongridge, Ltd., London, Ont.

For more details circle **NED-6602** on enclosed inquiry slip

SWEEPER ATTACHMENT
for use on small tractor

Hydraulically raised and lowered, this general purpose sweeper for use on International Cub tractors is rotated from the rear power take-off. Shafts turn on shielded self-aligning ball bearings. A tubular frame under the tractor has adjustment to compensate for brush wear and surface contour. Dust hood can be removed for snow sweeping. Refillable palmyra stalk brush measures 25 x 72 in. and has 60-in. sweeping path. Made by **Meili-Blumberg Corp.**, 1642 Wisconsin St., New Holstein, Wis.

For more details circle **NED-6603** on enclosed inquiry slip

HOLLOW CHISEL SHARPENER
bit fits into standard hand brace

Sharp cutting edges are produced on hollow wood chisels with this No. 820 sharpening tool. It fits into standard hand brace, and a few turns of brace scrapes

or files off burrs. Corners of hollow bit are finished with small square file. Made by **Woodworkers' Tool Works**, Room 116, 222 S. Jefferson St., Chicago 6, Ill.

For more details circle **NED-6604** on enclosed inquiry slip

PORTABLE HEAT LAMP FIXTURE
for use with infrared lamps

Drying paints, plaster or glue; thawing pipes, radiators and other plumbing; or warming motors of industrial vehicles are among the many jobs facilitated by the portable electric fixture for use with Heat Ray infra-red lamps. Bracket is equipped with socket of shockproof, heat-resistant porcelain, plugs into regular outlet, has rubber covered spring clamps which grip variety of objects and has universal joint for directing heat to any angle. Lamps are available frosted where glare is not a factor, or with amber, red-glow or ruby lenses for eliminating glare to degree desired. Silvered reflector builds up heat concentration. Illustration shows fixture used to dry aluminum foil on foil-cutting machine. Made by **Solar Electric Corp.**, Ensworth Rd., Warren, Pa.

For more details circle **NED-6605** on enclosed inquiry slip

NO OTHER OIL HYDRAULICS PERFORM LIKE "COMMERCIAL" OIL HYDRAULICS

Operating pressures recommended up to 1500 p.s.i.

CATALOG H-6 AVAILABLE ON REQUEST

THE COMMERCIAL SHEARING AND STAMPING CO.
YOUNGSTOWN 1, OHIO

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WITHOUT INCREASING COSTS!

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MAGNESIUM
DOCK BOARDS

MAGNESIUM light! MAGNESIUM strong! MAGLINER Dock Boards provide strength-to-spare for the heaviest of loads and equipment, yet are easily handled by one man! Eliminate loading accidents . . . lifting injuries! Get the benefits of smoother, faster, more efficient loading. Before investing in any dock board, write for descriptive bulletin DB-203.
Standard and Custom-engineered Models

MAGLINE, INC. • P.O. BOX 396 • PINCONNING, MICHIGAN

For more details circle **NED-6607** on enclosed inquiry slip

Moving or Storing is Rapid, Convenient and Inexpensive with

IRONBOUND SEMI-LIVE SKID PLATFORMS

Ruggedly built with capacities up to 2500 lbs. These units are quickly made mobile with the use of low cost lift jacks . . . One of the methods that Ironbound engineers use to increase production and conserve space at low cost.

SEMI-LIVE SKID WITH BOX TOP

. . . permanently attached or removable. Also available with many other superstructures to "Short-Haul" your products thru production or into storage. Useful in hundreds of spots in every plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle **NED-6608** on enclosed inquiry slip

School Daze!

Just because that bathing suit is proper at the beach, she shouldn't assume it's proper for the classroom, too!

And just because one bearing is best lubricated by one particular grade of oil, you shouldn't assume that the same oil is best for *all* bearings on that machine. In many cases it isn't.

OIL CUPS permit you to lubricate each bearing with the oil best suited to that bearing—thus prolonging bearing life, reducing maintenance costs, cutting down-time, boosting production. And oil cups fortunately *cost very little.*

Gits oil cups have been the standard for industry for more than 40 years. Gits Bros. has the largest selection of oil cups available anywhere. Call on Gits Bros. for a prompt, efficient solution to your lubrication problems.

Write for free Catalog No. 60-A

GITS BROS. MFG. CO.
1833 S. Kilbourn Ave. • Chicago 23, Ill.

For more details circle **NED-6609** on enclosed inquiry slip

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TRADE MARK

RSC Models

AUTOMATIC ADJUSTABLE CHAIRS

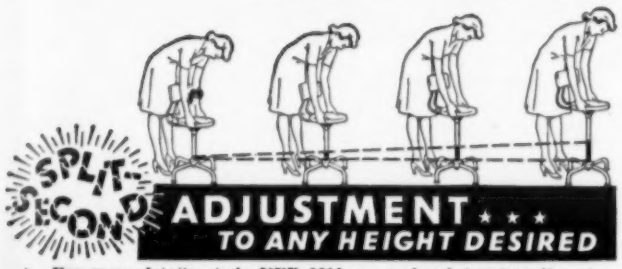
Ajustrite (formerly Kewaunee) adjustable chairs and stools are used extensively in Factories, Laboratories, Hospitals, Offices, Schools, Colleges, and Government Agencies. User adjusts to any desired height by merely lifting seat—no screws, bolts or tools.

Choice of 18 models. Height adjustment 15" to 20"; 18" to 26"; 24" to 35". Seats of plywood, hardwood, or molded FOAM RUBBER cushion. Self aligning back rests—horizontal and vertical adjustment.

Write for literature and free trial offer

AJUSTO EQUIPMENT CO.

2144 Madison Ave. Toledo 2, Ohio



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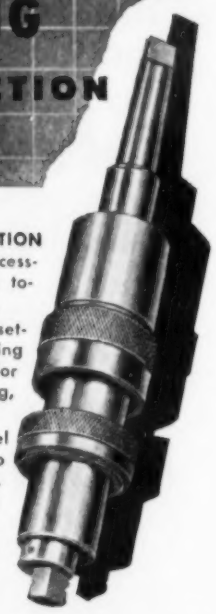
PRECISION INTERNAL FORMING TO MEET PRODUCTION DEMANDS



QUICK ADJUSTMENT AND POSITIVE ACTION make the **MAX-WELL-MADE** Model JF recessing tools especially suitable for use in today's high-speed production schedules.

This tool operates on any jig and fixture setup to cut snap ring grooves, "O" ring grooves and oil labyrinths as well as for inaccessible spot facing, external necking, precision undercutting, etc.

Accurate to within ±0.001-inch, Model JF is available in five sizes to pilot into standard bushings from 1" to 2¼ inches.

JF tools can be supplied with either standard Morse or adjustable adapter, quick-change, straight or special shanks.

Write today for catalog. (Model JF)

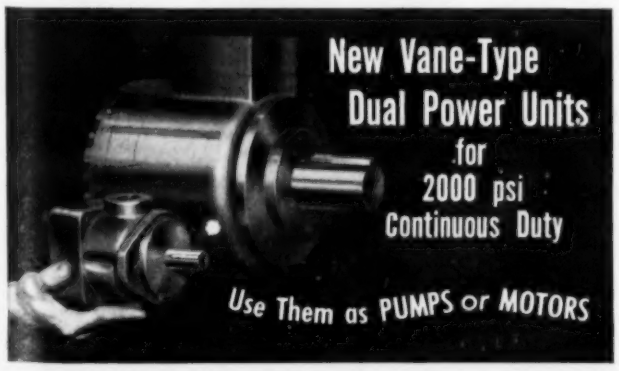
392-MC

THE MAXWELL COMPANY

380 BROADWAY • BEDFORD, OHIO

▲ For more details circle NED-6611 on enclosed inquiry slip ▲

BIGGEST NEWS FOR '52...



DENISON'S new vane-type power units are ready for use as either pumps or motors *without alterations of any kind.* They're rugged and compact; built for continuous duty at 2000 psi. Quickly convertible for either clockwise or counter-clockwise operation. Eleven models and sizes offer pumping capacities from 2½ to 70 gpm—or torque ratings for fluid motor use from 12 to 257 pound-inches per 100 psi. Denison Pump/Motors are hydraulically balanced throughout. Designed for widest possible choice of porting, directional and mounting arrangements. Get full details: write today for bulletin P-5.

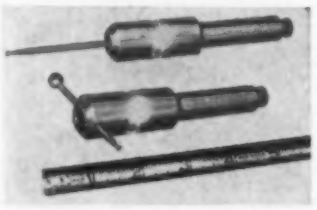
DENISON HydrOIlics

PUMP/MOTOR

The DENISON Engineering Company
1151 Dublin Rd.
Columbus 16, Ohio

▲ For more details circle NED-6612 on enclosed inquiry slip ▲

CENTER LOCATOR lights when desired point is found



Designed for use with milling machines, lathes, jig borers and drill presses where precision work is essential, this battery-operated Center Finder lights up when desired point is located. It is accurate to within 0.0001-in. when locating work points or in slot or hole centering. Compact enough to fit in tool case, device is usable also for trueing deep holes, locating spindle centers and setting recesses inside bores. Long offset, point and ball stems are supplied. Light flashes on whenever point contacts surface. List price is $3.95. Made by **Art-Mil Machine & Mfg. Inc.**, 170 Hosack St., Columbus 7, O.

▲ For more details circle NED-6613 on enclosed inquiry slip ▲

PRESSURE HOSE CLAMP for industrial hose and other uses

Offered in sizes to fit all industrial pressure hose and other applications from ¼ to 2½ in. OD, Band-It Jr. preformed industrial pressure clamp is made of high carbon coated steel. It is applied by regular Band-It tool with Band-It Jr. adapter. Clamps are quickly installed and are vibrationproof. Made by **Band-It Co.**, 2570 Walnut St., Denver 5, Colo.

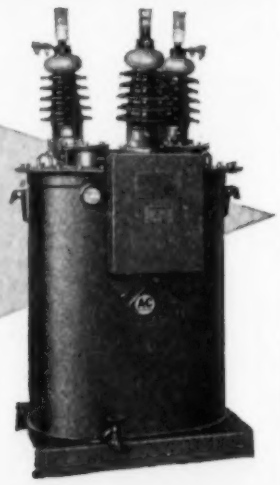
▲ For more details circle NED-6614 on enclosed inquiry slip ▲

CONTOUR GRINDER & POLISHER designed for confined area work

Grinding and polishing of small radius contours, such as jet blades, in confined areas is facilitated by model 400 contour grinder and polisher which has 18 x 24-in. base and stands 46 in. high. Standard ½-in. sealed ball bearing spindle allows quick change of contact wheels with various widths, shapes, diameter and durometer hardness. Standard 111-in. coated abrasive belts from ¼ to 2 in. wide are tracked by positive tracking mechanism. Contact wheel arm allows either sitting or standing operation of machine, with adjustment of 30 to 38 in. from floor level. Spring tensioning controls belt at all times. Made by **Curtis Machine Corp.**, 1302 E. Second St., Jamestown, N. Y.

▲ For more details circle NED-6615 on enclosed inquiry slip ▲

A DESIGN FOR ACCURACY



ALLIS-CHALMERS METERING OUTFITS

THIS METERING OUTFIT combines the characteristics of both potential and current transformers at real installation economy. And you get traditional A-C instrument transformer accuracy that equals or exceeds ASA standards.

Important advantages: 1) savings in space with only one unit to mount; 2) transformers interconnected at the factory to simplify installation; 3) neat appearance.

High safety factor and sound electrical design proved in years of successful operation under unusual conditions. All metering outfits are furnished with double current ratings to provide for future load growth.

For Bulletin 61B7168 on instrument transformers or metering outfits, contact your nearby A-C sales office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin.

A-3775

ALLIS-CHALMERS A-C

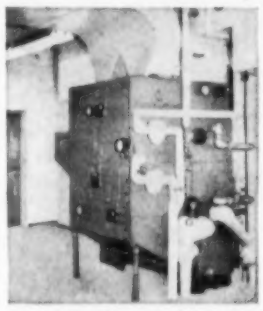
▲ For more details circle NED-6616 on enclosed inquiry slip ▲

Control Atmospheric Conditions with Precision

Control of atmospheric conditions for tests and experiments, maintenance of standard conditions while working with hygroscopic materials, prevention of moisture damage to instruments or materials, improved drying processes . . . all are provided more easily and reliably with this new Niagara "Controlled Humidity" Method.

The equipment is simple, easily maintained and gives trustworthy, automatic operation. A liquid absorbent, "Hygrol", removes the moisture from the air directly so that refrigeration is needed only for sensible heat removal, saving equipment and operating expense.

Units provide capacities ranging from 1000 c. f. m. to 20,000 c. f. m. and require less space than conventional apparatus. Conditions are completely controlled at will in the temperature range from 34°F. to 140°F. and below 32°F. if required.



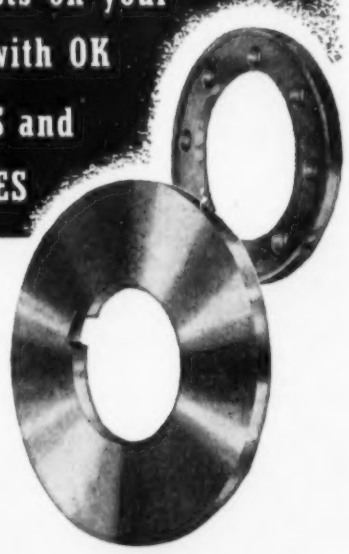
Write for Bulletin No. 112, address:

Niagara Blower Company, Dept. ED, 405 Lexington Ave., New York 17, N. Y.

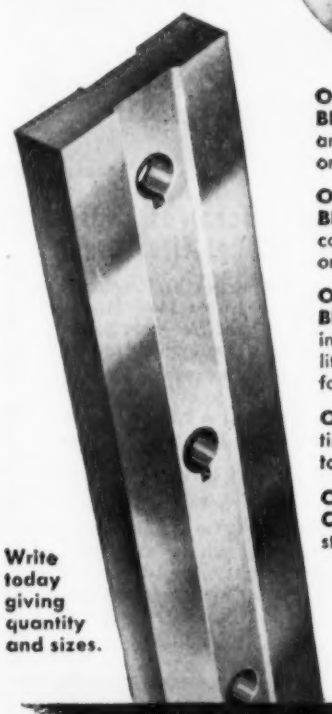
▲ For more details circle NED-6617 on enclosed inquiry slip ▲

it's OK ...let'er go!

cut costs on your toughest jobs with OK SHEAR BLADES and SLITTER KNIVES



Heat Treating does it. Gives them maximum toughness and keen edge holding qualities. You get longer runs between re-grindings.



OK Battle Axe Shear Blades for shearing up to and including ¼" mild steel or equivalent.

OK Dura-Chrome Shear Blades for shearing hot or cold plate steel up to 1¼" or equivalent.

OK Standard Shear Blades for any type shearing when only short runs or little shearing is done; also for heavy plate shearing.

OK Gang Slitters for slitting steel, precision ground to ± .0002 tolerances.

OK Rotary Shears and Cutters for trimming sheet steel and light plates.

Write today giving quantity and sizes.

GO WITH OHIO GREEN

THE OHIO KNIFE CO.

CINCINNATI 23, OHIO

▲ For more details circle NED-6618 on enclosed inquiry slip ▲

FOR VENTILATION, FUME AND DUST CONTROL AIR CONDITIONING

Light, Strong, Flexible

FLEXAUST

SPIRAL-REINFORCED HOSE

Flexaust is suitable for a wide variety of suction and pressure uses in ventilation, dust collection and fume control. **SIZES 1¼ inches to 24 inches.** Write for full information on this all-purpose hose. Various Flexaust types, accessories, and other hose types also available:

BLOFLEX *Non-reinforced collapsible*

PORTOVENT *Ring-reinforced retractable*

AMERICAN VENTILATING HOSE COMPANY

Dept. N-7, 100 Park Avenue, New York 17, N. Y.

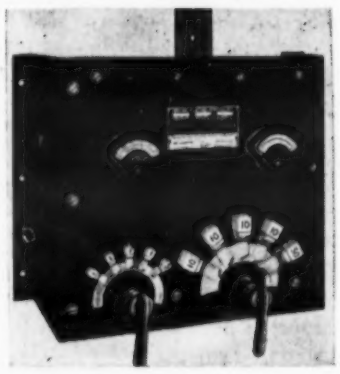
For more details circle NED-6619 on enclosed inquiry slip

CENTRIFUGAL WINCH BRAKE delivers gradual retarding action

Operating on centrifugal principle, this governing brake for electric or gasoline winches or similar power units delivers smooth, gradual retarding aciton at any desired interval within range of 900 to 4000 rpm. It also automatically checks speed of free-falling or free-running load. Cast aluminum brake shoes with Bonderized molded lining present braking surface of 26.5 sq in., and aluminum-magnesium housing with radial fins ensures high heat transmission. Brake is designed for shaft mounting, but is adaptable to special assemblies. Outside radius of housing is 9 in., height with floor mount is 11 7/16 in. and cross-section width is 2 11/16 in. Unit also is offered with flange mounted housing. Made by **St. Anthony Machine Products Co.,** Dept. KP, 2424 E. Franklin Ave., Minneapolis 6, Minn.

For more details circle NED-6622 on enclosed inquiry slip

RHEOSTATS have two lever amperage selectors



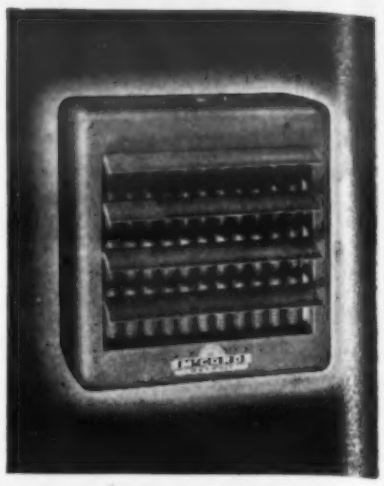
Close amperage regulation is provided by 100-amp commutating rheostats which have two lever selectors, the left which selects any amperage from 1 to 9, and the right for selecting 10 to 90 amps in steps of 10. For greater amperage, another switch can be added. Contacts engage rotary switch blade on both sides for positive contact and self-cleaning, wiping action. Helical nickel-chrome resistance coils are vertically mounted with positive spacing for self-cleaning. Case is open at top and bottom for continuous cooling. Rheostats can be furnished for ¼, ½, 1 and 5-amp step regulation in required capacities. Made by **Belke Mfg. Co.,** 941-47 N. Cicero Ave., Chicago 51, Ill.

For more details circle NED-6623 on enclosed inquiry slip

DO YOU KNOW? There's a new plastic slide rule that deals with silhouettes and data on the latest military aircraft. One side gives information on air frames, operational data and power plants of 42 aircraft. Other side is the Douglas Aircraft Co. airspeed vs. altitude chart. Available in lots of 50 for $25 from General Electric Co., Schenectady 5, N. Y.

For more details circle NED-6624 on enclosed inquiry slip

IMPROVED MODEL McCORD UNIT HEATER



The improved McCord Unit Heater incorporates every unit heater advancement that McCord engineers and the experience of thousands of users could suggest. The distinctive modern design with rounded corners combines improved appearance with greater strength and houses a heating unit that sets a new standard of heat transfer efficiency and quietness. The scientific design of the individual turbo spiral fin tube core provides even distribution of heated air at high velocity. The individual tubes prevent stresses due to unequal expansion. The entire heating unit is spring suspended and floats free in the casing eliminating rigid connections. Deep pitched fans provide high air delivery and quietness of operation.

This improved heater is a development of the experience gained from the thousands of McCord Unit Heaters in service. It combines good appearance with that inherent McCord quality of ruggedness and dependability that has made McCord the standard among many of the largest industrial users. You may also replace old leaking heaters using new McCord units and your old fan and motor. Write for new catalogs—Unit heaters and blast coil units. **McCord Corporation,** 2580 E. Grand Blvd., Detroit, Mich. —Advt.

For more details circle NED-6626 on enclosed inquiry slip

MANY INDUSTRIAL ROLL PROBLEMS are solved by using

SHAF-TITE* ROLLS

Minimum sizes 3" diameter and 3' face length

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel, plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48

Most complete publication of its kind

Industrial Roll Division

RODNEY HUNT MACHINE CO.

73 Maple Street, Orange, Mass.

*Reg. U.S. Pat. Off.

For more details circle NED-6620 on enclosed inquiry slip

Fire-Fighting Equipment

Triple-Action Nozzle Discharges Water Three Different Ways To Cut Fire Losses

Rockwood SG-48 Nozzle discharges high-velocity WaterFOG, straight water stream or low-velocity WaterFOG . . . to help you put out fires faster in ordinary combustibles and flammable liquids.

Made of light-weight aluminum alloy, it's as easy to handle as it is versatile. It comes in ¾", 1", 1½", and 2½" sizes to give you a choice of the following discharge ranges at 100 p.s.i. at the nozzle:

High-Velocity WaterFOG . . 20 to 30 feet
Straight Water Stream . . . 50 to 100 feet
Low-Velocity WaterFOG (through extension applicator) 10' to 22' diameter

Bulletin C501 gives you the whole story on Rockwood SG-48 Light-Weight Triple Action WaterFOG Nozzles. Write for your free copy today,

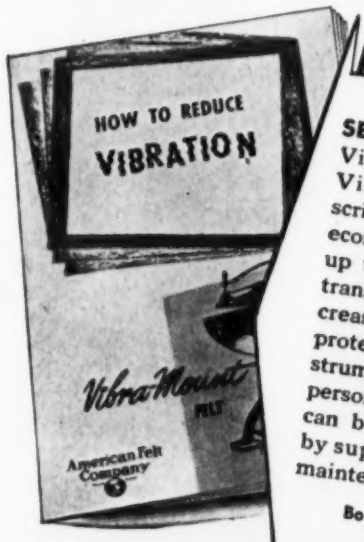
ROCKWOOD

ROCKWOOD SPRINKLER CO.

Engineers Water . . . to Cut Fire Losses

44 HARLOW STREET, WORCESTER 5, MASS.

For more details circle NED-6621 on enclosed inquiry slip



SEND for this booklet on Vibration Control by Vibra-Mounts. It describes the new, simple, economical way to obtain up to 85% reduction in transmitted vibration, increasing plant efficiency, protecting machines, instruments, buildings and personnel. Vibra-Mounts can be installed quickly by superintendents and maintenance men.

Booklet sent FREE on request.

American Felt Company

TRADE MARK

GENERAL OFFICES: 62 GLENVILLE ROAD, GLENVILLE, CONN.
SALES OFFICES: New York, Boston, Chicago, Detroit, Cleveland, Rochester, Philadelphia, St. Louis, Atlanta, Dallas, San Francisco, Los Angeles, Portland, Seattle, San Diego, Montreal — PLANTS: Glenville, Conn.; Franklin, Mass.; Newburgh, N. Y.; Detroit, Mich.; Westerly, R. I.— ENGINEERING AND RESEARCH LABORATORIES: Glenville, Conn.

For more details circle NED-6625 on enclosed inquiry slip

HEADLINE NEWS

EXTRA... DETROIT POWER SCREWDRIVER ANNOUNCES

IMMEDIATE DELIVERY

No Waiting—Start Now to Benefit with These Outstanding ASSEMBLY AIDS

Various Models to Suit Your Requirements

ADD Phenomenal Speed and Efficiency

No need to continue slow, costly hand methods; use Detroit Power Screwdrivers and profit immeasurably by increased production and economy. Drive all types of screws with almost incredible speed, as fast as one to two seconds per screw. Detroit Power Screwdrivers play an important part in the present-day industrial capacity to produce rapidly . . . So, now that prompt deliveries are made possible, send sample assembly for production estimate at once and let our 26 years' experience as specialists in assembly problems serve your individual needs. Also receive our catalog describing in detail our complete line of POWER SCREWDRIVERS, HOPPER FEEDING UNITS, NUT DRIVERS and SPECIAL ASSEMBLING MACHINES.

DETROIT POWER SCREWDRIVER CO.

2819 W. FORT ST. DETROIT 16, MICHIGAN

For more details circle NED-6627 on enclosed inquiry slip

Buckingham *Thread* Restorer

Now — no more drilling or hack sawing to replace damaged male threads! Buckingham Thread Restorer eliminates flats and nicks — cleans heavily rusted and corroded threads on studs, bolts, pipes, threaded shafts.

Simple — quick. Just slip on a Buckingham Thread Restorer at bottom of damaged area and back-off. Jaws adjust to any pitch — SAE, ASME, pipe or tapered. One tool handles many sizes . . . no die sets needed!

Eight models for ¼" to 6" threads. Write for free folder and name of nearest dealer.

BUCKINGHAM MANUFACTURING CO., INC.
65-67 Travis Street Binghamton, N. Y.

For more details circle NED-6628 on enclosed inquiry slip

DIMENSIONAL STABILITY Every single Kester Solderform is made exactly to specification. What's more . . . they are delivered that way to you, in perfect condition, because of Kester's scientific packaging.

Write for sample assortment or test samples for your specific job.

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, New Jersey • Brantford, Canada

KESTER SOLDER

For more details circle NED-6629 on enclosed inquiry slip

THE NEW
BAKER TYPE FS
gives you the most material handling you can get for your money in a
2000 POUND FORK TRUCK

Here's Why:

It's BUILT to take PUNISHMENT!
All-Steel welded frame; powerful Baker motors; efficient worm-drive power axle; dynamic-braking, 2-drum, 5-speed, NO Plug controller—all components are of the same basic construction as in our heavy-duty equipment for capacities up to 10,000 pounds.

It's the most MANEUVERABLE Truck in its class!
An FS with 36-inch forks can make a "U" turn in an 8½-foot aisle! It can stack a 48-inch load at right angles to a 10-foot aisle without sacrificing stability.

It's ECONOMICAL!
100% functional design means that every dollar you invest goes to work for you. You save on operating and on maintenance costs. *The FS is always on the job!* By any standard you apply, the FS is the best buy in its class.

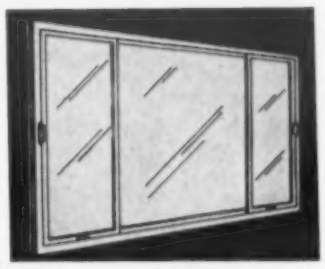
All the features engineered into the outstanding Baker Type FS, 2000-pound Fork Truck are described in an illustrated 8-page specification bulletin. • Write for your copy.

THE BAKER-RAULANG CO.
1245 WEST 80th STREET, CLEVELAND 2, OHIO

Baker INDUSTRIAL TRUCKS

For more details circle NED-6630 on enclosed inquiry slip

COMBINATION STORMS & SCREENS adaptable to casement-type windows



Annual changing of storm windows and screens can be eliminated by installing these Kaysto aluminum combination storms and screens. Combination units are custom-fitted by local distributors and are adaptable to many varieties of casement-type windows used by factories and commercial buildings. They can be installed on inside or outside of regular prime window and consist of sliding storm sash units and screen panels. Repair and maintenance needed is negligible. Storm sash is self-weather-stripped, and together with double glass barrier, provides complete insulating seal. Made by **Alumatic Corp. of America,** Dept. NED, 2081 S. 56th St., Milwaukee 14, Wis.

For more details circle NED-6631 on enclosed inquiry slip

DOUBLE-SUCTION PUMP for hydraulic service up to 200° F

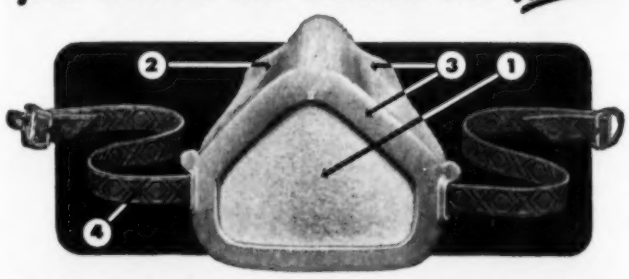
Among design improvements incorporated in class DMV-DHV line of small, single-stage, double-suction pumps are double mechanical shaft seals with sealed pre-lubricated ball bearings. Built in 3, 4, 5 and 6-in. sizes, the DMV (for medium heads) and the DHV (for high heads) are designed for hydraulic services at temperatures up to 200° F, capacities to 2100 gpm and pressures to 150 psi. Stuffing boxes have been eliminated to decrease shaft length between bearings, making it more rigid. Three spare parts kits are also available which contain all parts necessary to service entire pump line. Pumps can be equipped for noncorrosive service. Made by **Ingersoll-Rand Co.,** Dept. CAM, 11 Broadway, New York 4, N. Y.

For more details circle NED-6632 on enclosed inquiry slip

DO YOU KNOW? Workmen are adequately protected when restricted or hazardous zones in chemical plants are marked off with acid, alkali, mildew and rot resistant polyethylene barrier rope. Offered in red, white, black, yellow, olive drab or any combination of these colors, rope measures ¼-in. diameter and runs 90 ft per lb. Rope is expected to have many other applications throughout industry. Developed by Plymouth Cordage Co., 378 Court St., Plymouth, Mass.

For more details circle NED-6633 on enclosed inquiry slip

4 Reasons why FLEX-A-FOAM (and *only* FLEX-A-FOAM) provides Dust Protection your workers will welcome and *Wear*



1. Pure latex washable filter purifies the air of non-toxic nuisance dusts as small as 1/25000 of an inch — yet it's easier to breathe and talk through than an ordinary pocket handkerchief! Out-wears throw-away type filter as much as 100 to 1.
2. Perfectly contoured for self-adjusting fit to every size and shape of face—designed for wear with spectacles or goggles with perfect comfort.
3. Positive-locking frames of polyethelene plastic, so flexible and tough they're unbreakable in normal usage. Complete mask weighs only 1 ounce. Attractively styled to suit the most discriminating wearer.
4. Defiance non-skid, natural rubber head-band with adjustable hook-and-eye fasteners holds mask firm and comfortably snug without tension or hair-pulling.

FLEX-A-FOAM FILTER MASK

Sample $1.40 postpaid ★ Write for new descriptive folder

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

For more details circle NED-6634 on enclosed inquiry slip

Reach Anyone Instantly

Boost Output

Cut Costs

SAVE TIME WITH
ELECTRONIC
AMPLICALL
INTERCOMMUNICATION

Gear up *now* for bigger output and increased efficiency. AMPLICALL provides 2-second speech contact between all departments for fast relay of orders and information. Stops wasteful walking and waiting —keeps plant and office personnel on the job every working minute—takes the load off busy switchboards. AMPLICALL *gets more work done for every operations dollar spent*—pays for itself quickly. Get the full details *today.*

SEE YOUR CLASSIFIED PHONE BOOK under "Intercommunication" for your AMPLICALL specialist, or write us direct

Electroneering is our business
SOUND EQUIPMENT **Rauland** INTER-COMMUNICATION
RAULAND-BORG CORPORATION • 3523-D ADDISON ST., CHICAGO 18, ILL.

For more details circle NED-6635 on enclosed inquiry slip

One of the many specific uses of AETNA plywood — rotor blades for the famous Piasecki "HUP" Helicopter now in service with the Navy.

Need Help in Selecting PLYWOOD?

Does your product require some specific characteristic in plywood — perhaps unusual strength, dependable uniformity, light weight, resistance to heat, moisture or acids?

AETNA PLYWOOD & VENEER CO. offers the technical help of their Engineering Staff in all applications of plywood and veneers. These MEN WHO KNOW PLYWOOD have helped industry to a more effective use of plywood by providing up-to-the-minute industrial facts, performance data and design calculations.

Here are 5 reasons why AETNA is the single, most logical source for all your plywood buying:

1 LARGE STOCK on hand, including sizes cut to your specifications.
2 OVER 40 SPECIES—Fir, Gum, Birch, Walnut, etc. in stock 1/16" to 3" thick, 36" x 48" to 48" x 192".
3 MILL SHIPMENTS to your exact requirements.
4 QUICK DELIVERIES from 4 strategically located warehouses—completely stocked.
5 ENGINEERING STAFF to give you solid technical help.

Let AETNA help solve your problems on industrial uses of plywood

★ ★ ★

AETNA PLYWOOD & VENEER CO.
1718 N. Elston Avenue • Chicago 22, Illinois
ARmitage 6-7100

BRANCH WAREHOUSES: Grand Rapids 7, Mich.; Indianapolis 2, Ind.; Rockford, Ill.

AETNA—PLYWOOD for every purpose

For more details circle NED-6636 on enclosed inquiry slip

Prevent This LOSS with Mall Pneumatic Power Tools

Turn out more work, easier faster, with lightweight, vibrationless tools that reduce fatigue to an absolute maximum. Typical of Mall compactness and precision in pneumatic tools is this No. PG-K1030L Lever Throttle Die Grinder, weighing only ¾ of a pound and easily held in the palm of the hand. With a guaranteed speed of 30,000 rpm. and a maximum of .0015 runout at the collet, this Mall Pneumatic Die Grinder assures accuracy, precision and ease of operation.

Send For Complete Illustrated Bulletin With Price List.

40 Factory-Owned Warehouses, Coast To Coast, To Serve Our Customers.

MALL TOOL COMPANY
7727 S. Chicago Ave. • Chicago 19, Illinois

For more details circle NED-6637 on enclosed inquiry slip

PRODUCTION MEMO

HINGED STEEL CONVEYOR BELTING

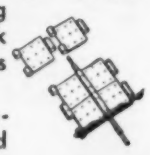
This can solve our problem

For handling

STEEL SCRAP—STAMPINGS
METAL PARTS—FLASH
HOT FORGINGS—TURNINGS & CHIPS

Assembled to your specifications from stocked component parts, MAY-FRAN hinged-steel conveyor belting withstands maximum production punishment. Only MAY-FRAN hinged-steel belting will handle hot or highly abrasive metal parts, scrap, forgings, stampings, flash and turnings as well as wet or dry chips.

Precision formed heavy-gauge hinged steel links are assembled by means of high-carbon steel rods, and side chains become an integral part of belt. Outside links incorporate newly designed interlocking wings which remain positively engaged at all times, even when belting is traveling over sprockets. Link and rod construction eliminates fall-through.



MAY-FRAN hinged-steel conveyor belting can be furnished in practically any width or length to meet your requirements. It is available in 2½, 4, 6, 9 and 12-inch pitch lengths with solid or perforated links.

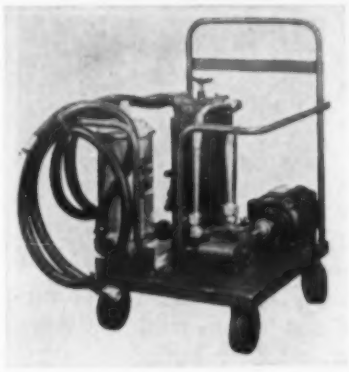
Write today for catalog.

448-MF

MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Rd., Cleveland 12, Ohio

For more details circle NED-6638 on enclosed inquiry slip

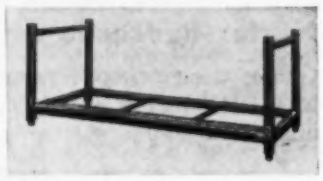
HYDRAULIC OIL CLEANER
portable unit circulates 10 gpm



Hydraulic oils used in machine tools can be cleaned by two-stage portable transfer unit consisting of Yale & Towne pump, Cuno Auto-Klean metal-edged filter in first stage and Cuno Micro-Klean filter in second stage. Latter unit filters out everything to 0.001-in. Tubing and Parker fittings conform to JIC standards, and 1½-in. hose assemblies facilitate assembly to tanks. Circulation rate is 10 gpm. Made by **J. N. Fauver Co.**, 47 W. Hancock Ave., Detroit 1, Mich.

For more details circle NED-6639 on enclosed inquiry slip

FOLDING STOCK RACK
nesting caps permit stacking



Nesting caps on the feet of this folding stock rack make it possible to stack loaded racks for more economical use of floor space. Rack is built of welded square steel tubing without detached parts. Developed for handling large stampings, it can be fitted with a floor for handling bulk goods. With end frames raised, telescoping tubular inserts lock them in position. Made by **Equipment Mfg., Inc.**, 21566 Hoover Rd., Detroit 4, Mich.

For more details circle NED-6640 on enclosed inquiry slip

LIQUID PACKAGING MACHINE
handles 120 film bags per minute

Variety of liquids, creams, oils, greases, concentrates, lotions and chemicals is packaged in either transparent or opaque plastic film bags by Stokeswrap automatic packaging machine which features positive displacement piston filling heads. Machine handles plastic film, forms pouch and heat seals edges at speeds up to 120 bags per minute. All parts in contact with product are non-corrosive. Other features are handwheel adjustment of fill without stopping machine and easy cleaning. Made by **Stokes & Smith Co.**, Dept. D, Frankford, Philadelphia 24, Pa.

For more details circle NED-6641 on enclosed inquiry slip

WATSON-STILLMAN
HYDRAULIC POWER TOOLS FOR INDUSTRY

HYDRAULIC JACKS
These sturdy units, with either independent or integral pumps, are useful for many jobs in construction and maintenance. Capacities from 20 to 300 tons.

WIRE ROPE SHEARS
W-S wire, cable and bar shears provide years of trouble-free general service. They are light and portable for convenient on-the-job use.

PORTABLE PIPE BENDERS
Bends standard, extra heavy and double extra heavy steel pipe from ⅜ in. to 2 in., as well as standard weight pipe up to 3 in. dia. Also solid mild steel bars up to 2 in. dia.

HAND PUMPS
Single and double plunger types, with reservoirs of different capacities for operating small hydraulic tools, jacks and other hydraulic equipment, and for general hydrostatic testing purposes.

9-M-10

Send for your copy of Bulletin A-5 . . . It's Free.

DISTRIBUTOR PRODUCTS DIVISION
WATSON-STILLMAN
ROSELLE, NEW JERSEY

For more details circle NED-6642 on enclosed inquiry slip

"YANKEE" ANGLE VISES

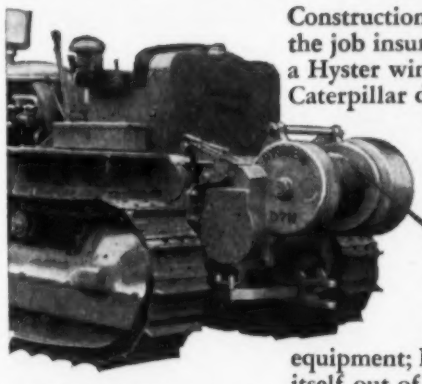
● Jig-type SET-UPS in jig time! One set-up for a series of operations, bench or machine. Position the work and set for angle. Securely held. Angle adjustment does not interfere with full capacity of jaw opening. Full 90° scale. Hardened face plates. V-block for holding round stock. Two sizes, 2" and 2¾" jaw widths. Same sizes also available with quick-release swivel base for use on bench. Economical jigs—big savings in tooling for small work.

Order from your distributor. Write for Industrial Booklet —Time - Saving "Yankee" Spiral Screw Drivers.

"YANKEE" TOOLS NOW PART OF STANLEY
THE TOOL BOX OF THE WORLD
NORTH BROS. MFG. CO.
Philadelphia 33, Pa.

For more details circle NED-6643 on enclosed inquiry slip

HYSTER® Winches have *R-E-A-C-H* and *Pull Power* for any construction job...



Hyster Tractor Winches are manufactured for use with Caterpillar D8, D7, D6, D4, D2 and DW-10 tractors. Included are Towing Winches, Worm Drive Winches, Hy-Speed Winches, Oil Well Servicing Winches, two and three drum Tractor Mounted Hoists.

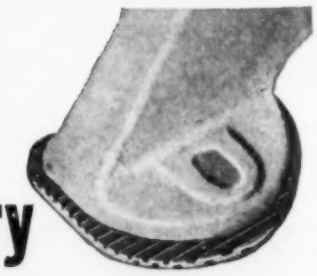
Construction men all know the job insurance provided by a Hyster winch mounted on a Caterpillar diesel tractor. The winch MOVES heavy equipment; RESCUES mud-bogged equipment; INSURES against work stoppage or down-time on any project using equipment; PULLS the tractor itself out of mud or other situations that have immobilized the unit.

Hyster winches and other tractor tools are sold and serviced at more than 700 Caterpillar dealer stores around the world. Consult your dealer. Write for literature.

HYSTER COMPANY
2906 N. E. CLACKAMAS, PORTLAND 8, OREGON
1806 NORTH ADAMS STREET, PEORIA 1, ILLINOIS

For more details circle NED-6644 on enclosed inquiry slip

How to install machinery



Faster! Easier! At lower cost!

ISOMODE® PADS permit you to install most machines without bolting, floor damage or costly, heavy bases. Placed under legs of equipment, they absorb impact-shocks and as much as 70% of the vibration. They thereby keep machines in place even without cementing — reduce noise — cut down both building and machine maintenance.

ISOMODE PADS, engineered from Du Pont "Neoprene," last for years. They permit you to locate or relocate machines anywhere, and on all types of flooring. Thousands of effective, money-saving installations have already been made — from bench equipment to high capacity punch presses. Why not try an installation to see the remarkable results first hand? Bulletin 415 gives more data — write today.

THE MB MANUFACTURING COMPANY, Inc.
1066 State Street, New Haven 11, Conn.

For more details circle NED-6645 on enclosed inquiry slip

THE CHROMALOX "CASE STUDY" BOOK may SAVE you time money labor

Low cost Chromalox Electric Heaters are doing most plastics processing jobs better, more efficiently, at less cost. This booklet highlights some of these jobs which range from vinyl fusing and laminating through forming, embossing and molding.

Write today for your copy of this useful and profitable booklet of "Case Studies."

IB-26

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pgh. 8, Pa.

See other advertisement on page 4.

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle **NED-6646** on enclosed inquiry slip ▲

for

• TOOL CRIBS • STOCK ROOMS • MACHINE SHOPS

Saves Time hunting through stacks of packaged drills. Compartments hold a gross of small sizes—a dozen or more of the larger ones. Raised letters on easy sliding drawers . . . hammerlin gray baked enamel finish . . . 14½"x7¼"x7¼".

Write for Circular
Model No. 1: Fractional drills ⅛" to ½"
Model No. 2: Number drills 1 to 60
Model No. 3: Letter drills A to Z

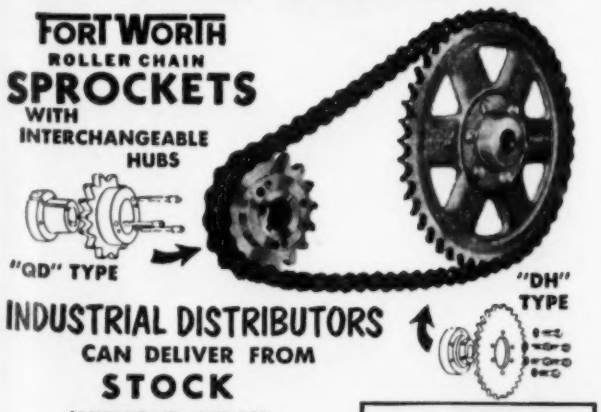
HUOT MFG. CO. 571 NORTH WHEELER ST. PAUL 5, MINNESOTA

Huot is pronounced "Hew-ot"

▲ For more details circle **NED-6647** on enclosed inquiry slip ▲

IMMEDIATE DELIVERY WITHOUT REBORING!

FORT WORTH ROLLER CHAIN SPROCKETS WITH INTERCHANGEABLE HUBS



INDUSTRIAL DISTRIBUTORS CAN DELIVER FROM STOCK WITHOUT DELAY FOR REBORING

FORT WORTH Sprockets Offer Many Advantages

- Actually Fits Shaft Better
- Reduces Cost of Spares
- Simplifies Changes
- Cuts Replacement Costs

HUBS ALSO FIT FORT WORTH TRANSCO V-BELT SHEAVES

CATALOG 300-C
Shows list prices and dimensions of stock QD & DH sprockets. Chain dimensions and drive recommendations are in easy-to-use form.

FORT WORTH STEEL AND MACHINERY CO
Dept. 227, 3600 McCart St. Fort Worth, Tex.

▲ For more details circle **NED-6648** on enclosed inquiry slip ▲

SMALL MERCURY SWITCH
embedded in plastic against breakage

Added protection against mechanical shock, impact or other hazards is afforded in IMPI mercury switches by embedding glass-enclosed switching element in plastic. Simplified mounting is additional advantage of this construction. Assembly measures 2½ x ¾ x 1⅛ in., provides less than 1 degree differential angle, and has electrical rating of 2 amp on 115-v ac or 1 amp on 115-v dc. Contact arrangement is single-pole normally-open. Mounting holes accommodate ¼-in. mounting screws and pins. Made by **Minneapolis-Honeywell Regulator Co.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle **NED-6649** on enclosed inquiry slip ▲

FAUCET PARTS CASE
compartments allow quick selection

All sizes of beveled and flat bibb washers, top bibb gaskets, bonnet nut packings and bibb screws for the repair or repacking of faucets are contained in the Giant Handy Andy No. 100 metal carrying case. Feature is 10-24 tap and handle for replacing rotted or corroded bibb screws. Compartments facilitate quick selection of needed part. Case has handle for easy carrying, plus lid which locks down tightly. Inside cover is an index of parts and sizes contained in each till, as well as illustration of system for properly rebuilding faucets. Made by **J. A. Sexauer Mfg. Co.,** Dept. AUP, 2503-05 Third Ave., New York 51, N. Y.

▲ For more details circle **NED-6650** on enclosed inquiry slip ▲

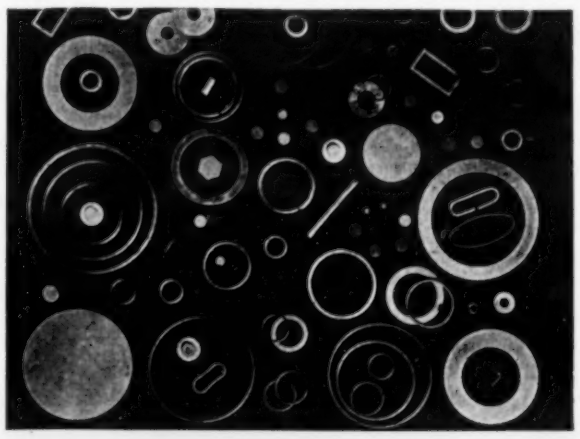
OCTAGON HAMMERS
with curved and ripping claws

A full octagon head and handle is design feature of line of 100 Plus octagon hammers available with curved and ripping claws in all popular sizes. Forged alloy steel head is heat treated and tempered for hardness and toughness. Claws are beveled to grip shank of nail or smallest brads. Select straight-grained hickory handles are Evertite processed, finished with clear lacquer and are triple-wedged into head. Made by **Stanley Works,** Stanley Tools Div., 104 Elm St., New Britain, Conn.

▲ For more details circle **NED-6651** on enclosed inquiry slip ▲

KRE-CO PREPLACED BRAZING ALLOYS LOWER JOINING COSTS

For speedier production and leak-tight joints stronger than the parent metal. Made from Easy-Flo, Sil Fos, Copper, Phos Copper, Bronze, Soft Solder and Aluminum in rings, disks, flat washers, stampings, and special shapes and sizes to meet all requirements. Speedy deliveries in any quantity. Interesting quotations. Tell us to present facts and figures to lower your brazing costs.



CHARLES W. KRIEG COMPANY
48-60 Dickerson St. - HUmboldt 5-2000 - Newark 4, New Jersey

▲ For more details circle **NED-6652** on enclosed inquiry slip ▲

Money Saving BALL BEARING DEVELOPMENT

Improved machine design, performance and longer service life at low cost is made possible by this unique Fafnir Ball Bearing Unit incorporating the famous Fafnir Wide Inner Ring Ball Bearing with self-locking collar. It eliminates costly machining where bearings are involved. Makes maintenance easier.

The FAFNIR FLANGETTE — for slow speed applications

1 *a completely-packaged ball bearing*
2 *easy to install — self aligning at assembly*
3 *lightweight, compact, sturdy*
4 *bearing protected by Mechaniseals (keep grease in, contaminants out)*

Get complete details. The Fafnir Bearing Company, New Britain, Conn.

FAFNIR BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

▲ For more details circle **NED-6653** on enclosed inquiry slip ▲

it's a better way to LIFT

TYPICAL APPLICATIONS

Hoisting heavy metal pieces into and off machine tool beds, stacking stock and finished parts, loading and unloading trucks, etc.

THE Dings Magna-Lift Magnet is ideal for miscellaneous metal lifting work in the shop. Hang it on a jib crane, hang it on any hoist. It's HANDY. It will handle any shape, no matter how irregular. It saves back-straining and man hours.

As the illustration shows, the Magna-Lift is tremendously powerful for its size. Ruggedly built, this magnet will work for years with little maintenance. Yet it is low cost. Size: 8" x 14" x 3". GET FULL DETAILS TODAY.

DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee 46, Wis.

—DINGS MAGNETS—

Non-Electric and Electric Pulleys — Non-Electric Drums — Non-Electric Plates

▲ For more details circle **NED-6654** on enclosed inquiry slip ▲

"HELP ON WHEELS"!

LATEST DICO'S Free CATALOG EDITION

. . Sure, Speedy HELP On Your WHEEL PROBLEMS

The latest edition of the DICO Company's WHEEL CATALOG **HELPS** you by answering your high speed and low speed wheel engineering problems . . . with simplified information and specifications on your needs of dependable, highest quality DICO Wheels. Be Sure YOU Get This **"HELP ON WHEELS"!**

DICO COMPANY

Write TODAY!

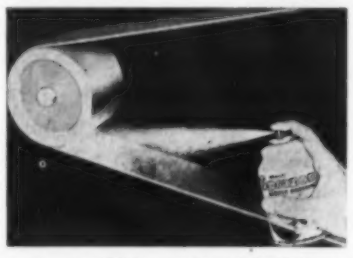
A modern line of industrial wheels 6"—22" rubber diameter.

206 S.W. 16th ST., DES MOINES, IOWA

For more details circle **NED-6655** on enclosed inquiry slip

New Processes and Materials

SPRAY TYPE BELT DRESSING applied from pressurized container



Dressing of moving belts and pulley faces is easy, safe operation with this Grako Sprazon belt dressing device. Spraytainer holds 12 oz of dressing which is enough to treat 350 sq ft of belting. Sprazon is clear liquid leather preservative that lubricates leather fibers, keeps belts pliable and imparts high coefficient of friction to minimize belt slippage. Pressing of finger valve releases powerful spray which can be directed wherever needed. Made by **Graton & Knight Co.,** 325 Franklin St., Worcester 4, Mass.

For more details circle **NED-6657** on enclosed inquiry slip

FLAMEPROOF ROOF COATING usable also as vapor barrier

Applicable by brush, spray or other conventional method, line of flameproof protective coatings for roofs is self-extinguishing and will not support combustion. Coatings are composed of flame resistant Polyloids and inorganic or metallic pigments in a solvent carrier. They dry rapidly to form a tough, elastic, permanently thermoplastic film in one-coat applications. Coverage ranges from 100 to 500 sq ft per gallon, depending upon surface to be treated and thickness desired. Single coats will not peel, blister or flake off. Coatings can also be used on metal, masonry, textiles, wallboard and other porous surfaces and moisture-vapor barriers. Made by **Grems Mfg. Co.,** 5635 S. Sixth St., Klamath Falls, Oreg.

For more details circle **NED-6658** on enclosed inquiry slip

INDUSTRIAL MARKING COLORS apply to wet or dry surfaces

Stripping, cornering or stenciling of crates and boxes slated for shipment is facilitated with group of 10 government - approved marking colors, including black and white, which apply to wet or dry surfaces and are water and weatherproof. Applicator can be felt roller, paint brush or spray gun. Also available are group of transparent colors, plus an opaque Block-Out-Brown shade which can be used to obliterate the marked surface of used containers or crates, as illustrated. Dispensers specially designed for these colors include the Fountain Marker, Felt Roller and the Deckmarker. Made by **Floquil Products, Inc.,** Dept. ND, 1993 Broadway, New York 23, N. Y.

For more details circle **NED-6659** on enclosed inquiry slip

NICKEL CATHODE ALLOY has high emission and long life

First of series of nickel cathode alloys being introduced under the trade name Cathaloys, for use in all types of electron tubes, is now available. Designated as A-30, alloy contains about 0.1-per cent aluminum as principal reducing agent for the coating. High performance characteristics are rapid cathode activation, high electron emission at low operating temperatures, high resistance to leakage between electrodes through control of sublimation characteristics, negligible electrical impedance of interface layer between cathode coating and alloy's base material, and long life with minimum change in electrical characteristics. Alloy can be supplied to dimensions and tolerances that are standard throughout electron tube industry and in seamless, Weldrawn or Lockseam construction. Developed by **Superior Tube Co.,** 2126 Germantown Ave., Norristown, Pa.

For more details circle **NED-6660** on enclosed inquiry slip

Deliver Exact Pressure!

Hein-Werner "Push and Pull" Hydraulic Jack with gauge attached

Exert the exact pressure you need without guesswork or hit-and-miss methods. Just use a HEIN-WERNER 10 ton or 20 ton "Push and Pull" Hydraulic Jack equipped with pressure gauge. These powerful jacks have a highly accurate, factory installed gauge calibrated for pressure in tons, with separate readings for push and pull. A red indicating needle shows the highest pressure on either push or pull and remains at that point until set back. A black needle shows the pressure prevailing during a pushing or pulling operation. Get all the facts from your industrial supply distributor or write us.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION • WAUKESHA • WIS.

For more details circle **NED-6661** on enclosed inquiry slip

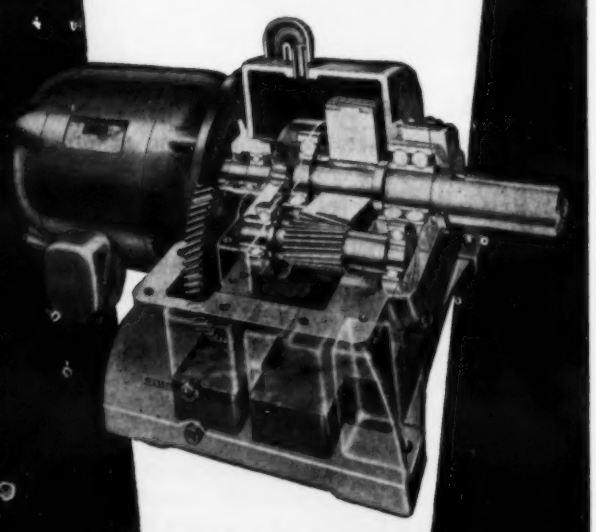
Here's how to cut servicing time on Gearmotors

The answer is—use Gearmotors that have split-case construction. For either electrical or mechanical inspection or maintenance, split-case construction saves many hours of costly time by providing easy accessibility to the gears or the motor.

Simply by removing the top half of the gear case, the gears or the motor can be inspected or repaired without touching the mounting bolts—without draining the oil—without disturbing the connected load. The complete job takes but a few minutes.

Get the complete details on Life-Line Gearmotors from your Westinghouse representative. Or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-07316



YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line GEARMOTORS

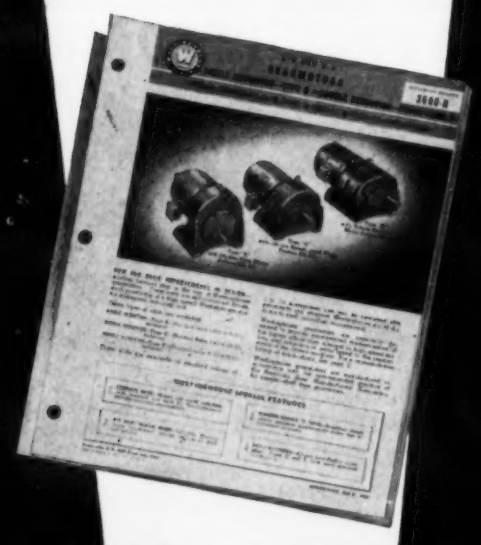
For more details circle **NED-6656** on enclosed inquiry slip

Get your free copy of this Gearmotor booklet

Here are eight pages packed full of factual information on Life-Line Gearmotors. Application data, gearing specifications, motor specifications, methods of mounting, control selection and special features are included in this ready reference manual.

A free copy is waiting for you. Just send a note asking for a copy of DB-3600 to Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pennsylvania. Or, call your Westinghouse representative and ask him for your copy.

J-07317



YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line GEARMOTORS

For more details circle **NED-6662** on enclosed inquiry slip

Over 85% of the torque wrenches used in industry are

STURTEVANT TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch ounces
...inch pounds
...foot pounds
(All sizes from 0-6000 ft. lbs.)

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

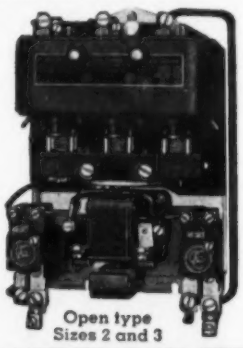
For more details circle NED-6663 on enclosed inquiry slip

CLARK Type "CY"

AC MAGNETIC MOTOR STARTERS
now available in
WATERTIGHT ENCLOSURES

The sensational new CLARK Type "CY" motor starters are offered in a wide variety of types and enclosures for use in such industrial atmospheres as hazardous gas, dust or excessive humidity. Illustrated above, is the NEMA Type 4 Watertight Enclosures, for sizes 0, 1, 2, and 3.

CLARK Type "CY" starters, sizes 2 and 3, have an entirely new arc-quenching principle which greatly increases contact life, by a constant rotation of the arc on contact surfaces.



Open type Sizes 2 and 3

Write for descriptive literature.

THE CLARK CONTROLLER CO.
ENGINEERED ELECTRICAL CONTROL • 1146 EAST 152ND STREET, CLEVELAND 10, OHIO

For more details circle NED-6664 on enclosed inquiry slip

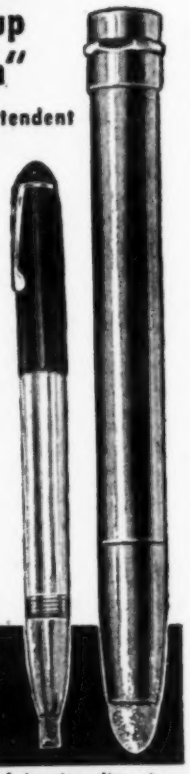
"Marking Parts in COLOR has speeded up our Production"
—writes a Plant Superintendent

And that's where the Flo-master Felt Tip Marker comes in. The complete range of colored Flo-master Inks permits detailed and accurate identification for assembling, stocking, inspecting. And the Flo-master Felt Tip just glides over any surface—metal, wood, plastic, etc. with fine lines or BIG BOLD lines.

Flo-master semi-opaque inks—waterproof, non-smudging, fast-drying—are recommended for dark, hard-to-mark surfaces using the KING SIZE Flo-master. For light colored surfaces use Transparent Inks with POCKET SIZE Flo-master.

This versatile marker is also ideal for marking shipping cartons, boxes, making posters, graphs, sketches.

Contact your supplier or write direct to Cushman & Denison Mfg. Co., 153 W. 23rd St. N. Y. 11.



Flo-master
FELT-TIP MARKER

For more details circle NED-6665 on enclosed inquiry slip

New Processes & Materials

PLASTIC TAPE
for mechanical or electrical uses

Practical for both electrical and mechanical purposes, Panther plastic tape will adhere to any dry surface even at low temperatures and resists water, oils, chemicals and weather extremes. Though only 7 mils thick, tape withstands 10,000 v and has insulation resistance of over a million megohms per 10 sq in. of tape. It will stand 20 lb of pull per inch of width without breaking, yet stretches readily to allow smooth wrapping. Tape is available in standard rolls packed in individual cans, service packs or counter display units. It carries Underwriters' Laboratories approval and complies with government and commercial specifications. Made by **Okonite Co.**, Tape Dept., 1952 Canal St., Passaic, N. J.

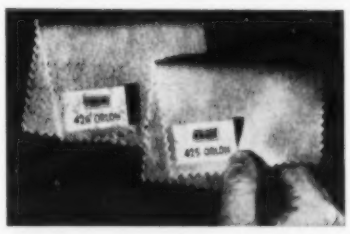
For more details circle NED-6666 on enclosed inquiry slip

CHEMICAL RESISTANT PLASTIC
moldable in any size or shape

Combining properties of high strength, chemical and heat resistance, Chemrock moldable plastic is usable in plating, textile, paper, petroleum, mining, chemical and process industries. Sag point is reported as 50 to 100° F higher than chemically resistant hard rubbers. It will withstand attack by most chemical and caustic solutions of concentrations commonly used in industry. Made by **Richardson Co.**, 2766 Lake St., Melrose Park, Ill.

For more details circle NED-6667 on enclosed inquiry slip

FILTRATION FABRICS
suited for hot corrosive materials



Designed specifically for dry-separation equipment and dust collectors, Feon 425 and 426 filtration fabrics are practical for hot, corrosive materials. They can be used at operating temperatures up to 300° F and resist attack by strong mineral acids, chlorine, oxidizing chemicals, solvents, oils and weak alkalies. High strength of Orlon fiber allows use of lightweight fabrics with short-staple, highly-napped construction to give maximum air permeability. Fabrics are available as yard goods or tailored into bags or tubes to fit dust collecting equipment. Made by **Filtration Engineers, Inc.**, Filtration Fabrics Div., 155 Oraton St., Newark 4, N. J.

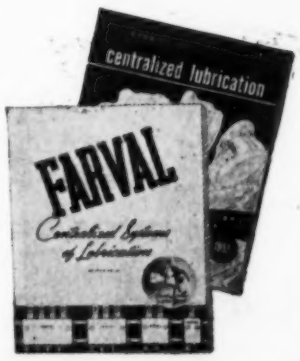
For more details circle NED-6668 on enclosed inquiry slip

Let Farval do your lubricating and step up machine production

THROUGH efficient, dependable lubrication of machines and industrial equipment of all kinds, Farval saves 4 ways: It saves oiling labor, it saves lubricant, it reduces bearing expense, and most important of all, it eliminates down time, thereby increasing machine production.

The Farval System is a positive mechanical method of delivering oil or grease under pressure to a group of bearings from one central station, in exact quantities, as often as desired. It consists of a central pumping unit, automatic or manually operated, two main supply lines and a measuring valve for each bearing.

"Case Studies 1952" and Bulletin 25 give you the facts and figures. Write to The Farval Corporation, 3283 East 80th Street, Cleveland 4, Ohio.



Write for these FREE bulletins

FARVAL
CENTRALIZED SYSTEMS OF LUBRICATION

For more details circle NED-6669 on enclosed inquiry slip

Does your company maintain shower rooms ?

If so, you should ask yourself this question:

"Why do over 70% of the largest manufacturers in the U.S.A. use ŌNOX in *their* shower rooms?"

ANSWER: ŌNOX SKIN-TOUGHENING has proved to be the easiest and most effective way to prevent Athlete's Foot.

Skin specialists say that the best chance of preventing Athlete's Foot is to *stop* trying to disinfect the feet and concentrate instead on improving the condition of the skin.

A sound skin is nature's best protection against fungus attack.

That is the basic principle of ŌNOX SKIN-TOUGHENING and is the reason it is so widely used today. *Easy to maintain • Nothing to get out of order.*

Write for further information and details of
60-DAY TRIAL OFFER

ŌNOX, INC. 125 SECOND ST., SAN FRANCISCO 5, CALIF.
WAREHOUSES: BROOKLYN • CLEVELAND • NEW ORLEANS • LOS ANGELES

For more details circle NED-6670 on enclosed inquiry slip

ASK FOR YOUR FREE COPY!

IT'S JAM-PACKED WITH MONEY-SAVING IDEAS

There are dozens of ways the Zip-Lift can help you cut costs with "thru-the-air" handling. The Zip-Lift is easy to install. Hang it up on hook, jib, or trolley, and plug it in. Handles loads up to one ton. Write for Bulletin H20-1. This fully illustrated bulletin suggests many ways you can save time, effort, and money in your plant. Write today.

HARNISCHFEGER CORPORATION
4537 W. NATIONAL AVENUE • MILWAUKEE 46, WISCONSIN

For more details circle NED-6671 on enclosed inquiry slip

SPO AIR VIBRATORS

Specify SPO dependable, low-cost air vibrators for all materials handling and foundry applications.

SPO vibrators feature full power starting, hammer-like blows, high-speed operation, long trouble-free service life.

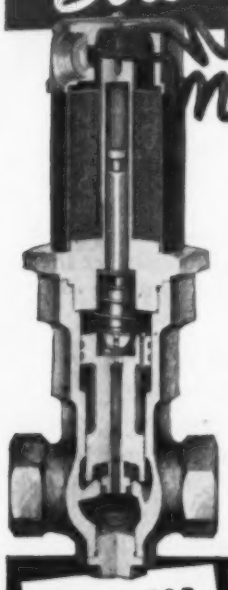
Blow for blow, you can't beat SPO air vibrators! For information on complete line, write today for Bulletin 50.

529-S1

SPO INCORPORATED
6475 Grand Division Ave. • Cleveland 25, Ohio

For more details circle NED-6672 on enclosed inquiry slip

ATKOMATIC Solenoid Valves



FOR AUTOMATIC OR REMOTE CONTROL

1. DAMAGING WATER HAMMER ELIMINATED.
2. ALL INTERNAL PARTS ACCESSIBLE without removing valve from line or breaking electrical connection.
3. PACKLESS—sealed operating chamber. No outside moving parts.
4. ONLY 3 MOVING PARTS, and no linkage of parts.
5. LINE PRESSURE IS MAIN ACTUATING FORCE—operates with slight pressure drop across seat.
6. OPERATING PRESSURES TO 3000 PSI.

ALL SIZES ¼" to 3"

WRITE FOR LITERATURE

Atkomatic Valve Co.
545 WEST ABBOTT ST.
INDIANAPOLIS 25, INDIANA

For more details circle NED-6673 on enclosed inquiry slip

USE HOUGHTON

Cosmolube

*THE MULTI-PURPOSE GREASE THAT PUMPS EASILY AT

20° Below!

MEETS THE NEEDS OF EVERY INDUSTRY FOR HOT SPOTS—COLD SPOTS—WET SPOTS

- ★ High melting point
- ★ Won't dissolve
- ★ Resists oxidation
- ★ Adhesive to metal
- ★ Won't separate
- ★ Only one grease to buy and apply

GET LATEST BULLETIN on this heavy-duty grease that simplifies your inventory . . . Write to E. F. Houghton & Co., 303 W. Lehigh Avenue, Philadelphia 33, Pa.

COSMOLUBE
. . . a product of
E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

For more details circle NED-6674 on enclosed inquiry slip

PLATE...to TUBE... to 5 ton MANIFOLD

(cost cut 20%)

Estimated savings from Dresser's practical method of making weldments like this . . . 20% of cost, 30% of weight. And by using Dresser's specialized ring-making experience, this customer kept his own facilities free for normal production.

If you use ring-shaped parts of subassemblies, send today for Dresser's "RINGS" folder. It may be the first step toward big savings.

"RINGS" folder shows Dresser method, defines size limits, etc. Write Dresser Manufacturing Division, 59 Fisher Ave., Bradford, Pa.

DRESSER RINGS

ONE OF THE DRESSER INDUSTRIES

For more details circle NED-6675 on enclosed inquiry slip

New Processes & Materials

PLASTIC PIPE is lightweight and flexible

Carlon flexible plastic pipe, suitable for enclosing and protecting all types of electrical wiring in underground, underwater and concrete-encased installations, has dielectric strength of 500 v per mil. Pipe is flexible, can be bent cold and stapled to building framework. It is supplied in lengths up to 400 ft and uses molded plastic fittings which require no special tools to apply. Pipe withstands rot, electrolytic corrosion and corrosive chemical actions of water and soils. Made by **Carlon Products Corp.**, 10225 Meech Ave., Cleveland 5, O.

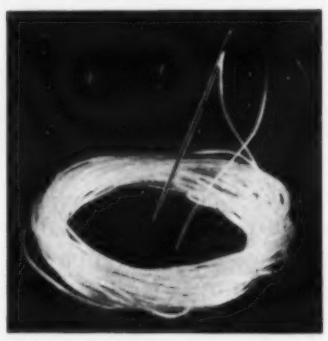
For more details circle NED-6676 on enclosed inquiry slip

CONVEYOR BELTING is resistant to vegetable oils

All the desirable properties of Neoprene synthetic rubber plus resistance to vegetable oils are embodied in Neoprene type W.R.T., used in white Supertex belting. Conveyor belting material is washable; oil and water proof; tasteless; odorless; nontoxic and acid, alkali and heat resistant. New material has better crystalization resistance and lower compression set over a wide temperature range than previously used Neoprene. Belting made by **Baldwin Belting, Inc.**, 76 Murray St., New York 7, N. Y.

For more details circle NED-6677 on enclosed inquiry slip

EXTRA SMALL PLASTIC TUBING for insulating miniature components



Having 0.012-in. inside diameter and 0.012-in. wall thickness, this extremely fine diameter extruded plastic tubing is designed for use on small and miniature electrical and electronic components. Material retains physical characteristics and electrical properties of Templex 105 and Transflex tubing. Made by **Irvington Varnish & Insulator Co.**, Fibron Div., Dept. NED, 6 Argyle Terrace, Irvington 11, N. J.

For more details circle NED-6678 on enclosed inquiry slip

Bearing "Bobbles"?

PITCHLIGN

Trade Mark

Roller Bearings may be the answer

Find Out!

RBC's PITCHLIGN bearings use a new type of 4-way roller control applied so that maximum efficiency is always obtained . . . rollers will not cock or jam as a result of incidental misalignment. PITCHLIGN saves weight, saves money—has the longest working life of any interchangeable bearing on the market. Get the facts! Write for Bulletin SF. 966.

WRITE TODAY!

RBC
ROLLER BEARING COMPANY OF AMERICA
TRENTON, N. J.

For more details circle NED-6679 on enclosed inquiry slip

reel up idle air hose

Don't clutter up your shop with loose coils of air hose. See how **Schrader's "Tuck-Away" Hose Reels** will add new safety to your use of air—how they'll keep air lines out of harm's way . . . eliminate a traffic hazard in your shop.

Compact, easy to install, Schrader Hose Reels deliver just the wanted length of hose, rewind it quickly with a slight tug.

Write for details on the Schrader "Tuck-Away" Hose Reel and other Schrader air accessories that will help you get the most out of your air line equipment. Write Schrader today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Ave., Dept. E-48, Brooklyn 17, N. Y.

For more details circle NED-6660 on enclosed inquiry slip

Automatic Stock Push-Up Hack Saw Machines

Capacities:
No. 6A: 6" x 6"
No. 9A: 10" x 10"

Feed, Measure, Cut-Off—AUTOMATICALLY

These automatic stock push-up hack saw machines are not new. MARVEL built the first practical bar feed hack saw machines, over 30 years ago. The sound, proven, basic principle of these machines has never changed—but they have been constantly improved and refined. Today they are still the leaders—the most practical, fastest, most accurate, most productive cutting hack saw machines built. No matter what your cut-off work, let us recommend the MARVEL saw that will give you true economy, speed and accuracy at an attractive price.

Write for Catalog

MARVEL Metal Cutting SAWS
Better Machines-Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

For more details circle NED-6681 on enclosed inquiry slip

FOR THE BEST IN FLEXIBLE CORDS SPECIFY

DYNAPRENE

DYNAPRENE has all the good qualities of neoprene with extra long life added. This extra life or toughness or abrasion resistance is brought about by the special neoprene compound developed by experienced research engineers at Whitney Blake. This compound, cured by the continuous vulcanizing process that assures accurate centering, correct jacket thickness and even cure, is impervious to all those harmful conditions and substances that shorten the life of rubber-jacketed cords.

Be sure to specify Whitney Blake SO, SJO or SV-type neoprene jacket for your flexible cord requirements.

WHITNEY BLAKE COMPANY
WELL BUILT WIRES SINCE 1899
NEW HAVEN 14, CONNECTICUT

For more details circle NED-6682 on enclosed inquiry slip

Wolverine PLUNGER TYPE TOGGLE CLAMP

SINCE 1926

FAST • ACCURATE • POWERFUL

MODEL C-130-A

The combination of a precision ground plunger and an accurately broached hole permits this clamp to be used for locating as well as heavy duty clamping.

IMMEDIATE DELIVERY
Write for catalog.

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICH.

A WOLVERINE CLAMP TO SUIT YOUR NEEDS

For more details circle NED-6683 on enclosed inquiry slip

Speed Production...Save Money with

WEBBER

TRADE MARK REGISTERED

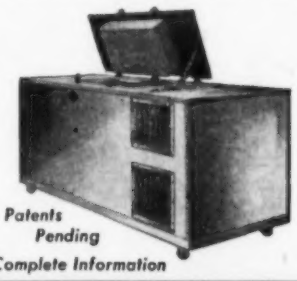
INDUSTRIAL FREEZERS

Webber Industrial Freezers can save you time and money on the following operations:

- In the Shrink Fit of Metals for Production and Assembly
- For Stabilization of Metals for Tool and Fixture Manufacturers
- For Metal Hardening—For greater tool life and accuracy
- For Storage and Testing of Materials at Extremely Low Temperatures
- For Chemical Curing, Ageing and Processing
- Eliminates Dry Ice Applications and Overhead
- Amortizes itself in less than one year
- Performs Low Temperature Services with Greater Dependability and Accuracy to Temperatures as Low as —165° below zero.

Cut your operating costs, Improve Quality and Production, Save Valuable Tools, and Improve Testing Methods with Webber Industrial Freezers

36 Standard Models . . .
or Built to Your Specifications . . . at No Additional Cost.
A Freezer for Every Need
REPRESENTATIVES IN MOST CITIES



Patents Pending

Write for More Complete Information

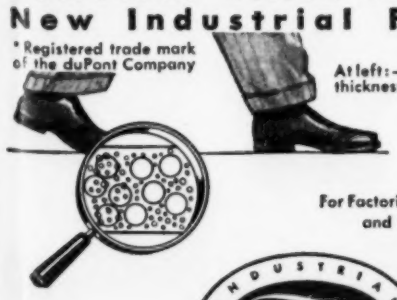
INDUSTRIAL FREEZER DIVISION
WEBBER APPLIANCE CO., INC.
A-2740 MADISON AVENUE • INDIANAPOLIS 3, INDIANA

For more details circle NED-6684 on enclosed inquiry slip

NEW! fulltred® Floor Wax with Ludox*

Slipping Retarded with Ludox* Colloidal Silica in FULLER'S New Industrial Floor Wax

* Registered trade mark of the duPont Company



At left:—Wax film of approx. .0001" thickness, magnified 200,000 times to show how your feet press "Ludox" spheres into the larger wax particles.

For Factories, Institutions and Buildings

INDUSTRIAL Fuller BRUSH CO. DIV.

3530 MAIN STREET HARTFORD 2, CONN.

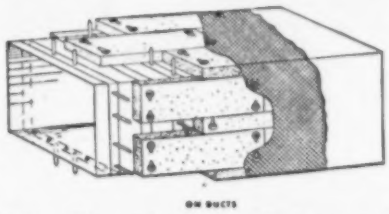
Fullergrip, Wet and Dry Mops, Brooms, Floor and Special Brushes.

For more details circle NED-6685 on enclosed inquiry slip

New Processes & Materials

INSULATION STRAPPING
fastens it to pipes, tanks, walls

Insulation of all types can be applied quickly and permanently to pipes, ducts, tanks and flat walls by Finger Strap, a metal strapping that is ¾-in. wide and offered in thicknesses from 0.015 to 0.035-in. Tapered ¼-in. fingers, spaced at intervals of 5 to 12 in. impale the insulation, then are bent over to hold it. Strapping is applied around tanks, ducts or pipes with a Steelbinder strapping tool and is nailed or screwed to flat surfaces. Finger Strap is offered in continuous coils in plain steel, galvanized, stainless 430 or Monel. Fingers are from 1⅜ to 4½ in. long. Made by **A. J. Gerrard & Co.**, 1954 N. Hawthorne Ave., Melrose Park, Ill.



ON DUCTS

For more details circle NED-6686 on enclosed inquiry slip

PAINT DEODORANT
eliminates fresh paint odors

Few drops of Mask deodorant for all enamels, oil, water and rubber-base paints eliminates offensive fresh paint odors. Rooms painted in the morning can be reoccupied at noon without discomfort. Product costs less than 10 cents per quart of paint and does not affect any paint characteristics other than odor. Made by **Duncan-West Corp.**, Dept. NED-123, 624 S. Michigan Ave., Chicago 5, Ill.

For more details circle NED-6687 on enclosed inquiry slip

ABRASIVE CEMENT
for polishing wheels and belts

Polishing wheels and abrasive belts can be quickly reheaded with Grip Grain cold cement. Users claim it can be used successfully on grains from 20 to 320 and requires no special preparation to salvage worn out belts or wheels. Heat is not required for drying. Cement provides peak efficiency, cuts down time for wheel changes to a minimum, is odorless and has adhesive action which "locks" emery grain to surface. Sufficient quantities are available for testing purposes without cost. Developed by **Schaffner Mfg. Co.**, Herron Ave., Emsworth, Pittsburgh 2, Pa.

For more details circle NED-6688 on enclosed inquiry slip

MYSTIK Spra-Mask

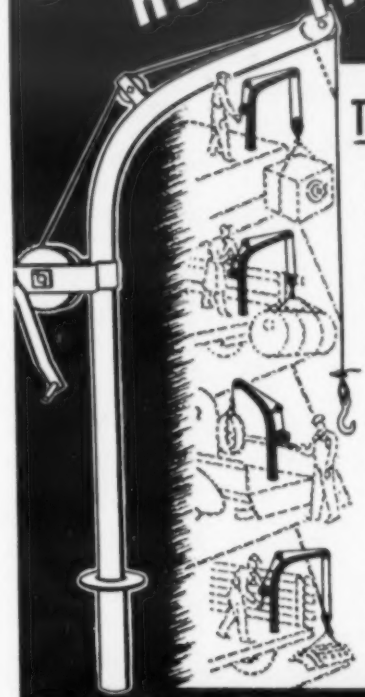
Gives you Hand-Lettered Results with Speed and Low Cost of Stenciling

For fast, easy stenciling, get MYSTIK Self-Stik Spra-Mask. Die-cut to any design you wish, it sticks firmly to the surface to be painted, permitting one-man operation. There's no bleeding through the mask or under the edges to worry about. Just put it in place, cut the ties and spray. That's all you need to do for sharp, clear stencils. Available die-cut, in sheets, or in rolls of blank stock up to 36" x 60 yards inclusive. Write for information and free samples.
Mystik Adhesive Products,
2657 N. Kildare,
Chicago 39.

For more details circle NED-6689 on enclosed inquiry slip

BLUE HERON TRUCK CRANE SAVES

Time Money Labor



ONE MAN can handle up to ONE TON—EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

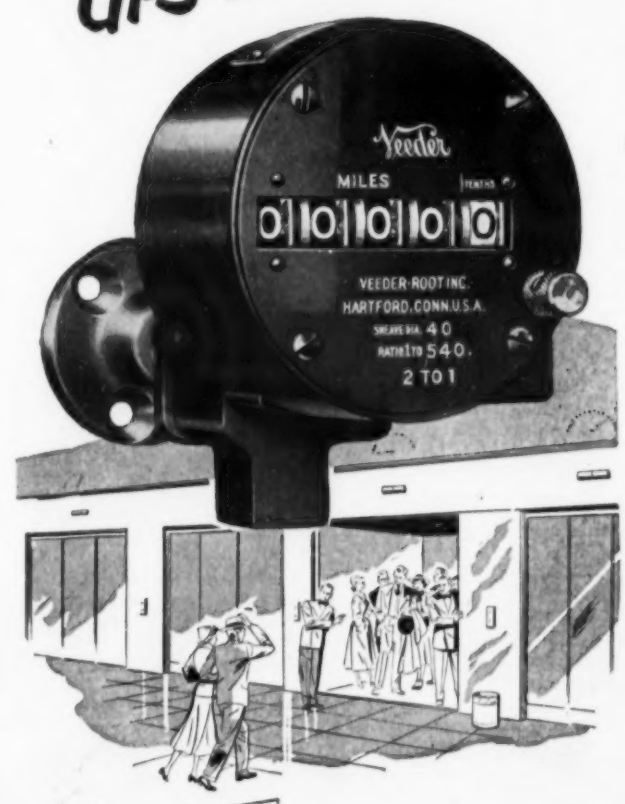
Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

For more details circle NED-6690 on enclosed inquiry slip

It counts your "UPS and DOWNS"



Added Evidence that

Everyone Can Count on VEEDER-ROOT

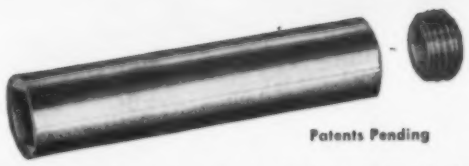
Elevator Mileage Recorders give accurate figures on vertical miles . . . so that it can be plainly seen...*in advance*...when it's time to replace cables, overhaul cars, motors, and what have *you . . . including your life.*

Yes, the V-R wheelmark monogram protects millions of people daily, from the depths of the sea to the stratosphere. Of course, not all V-R Products and services are available nowadays . . . but if your work counts importantly in defense, then you can count on Veeder-Root to help you, as soon as rush commitments permit.

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONN.

For more details circle NED-6691 on enclosed inquiry slip

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



Patents Pending

One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

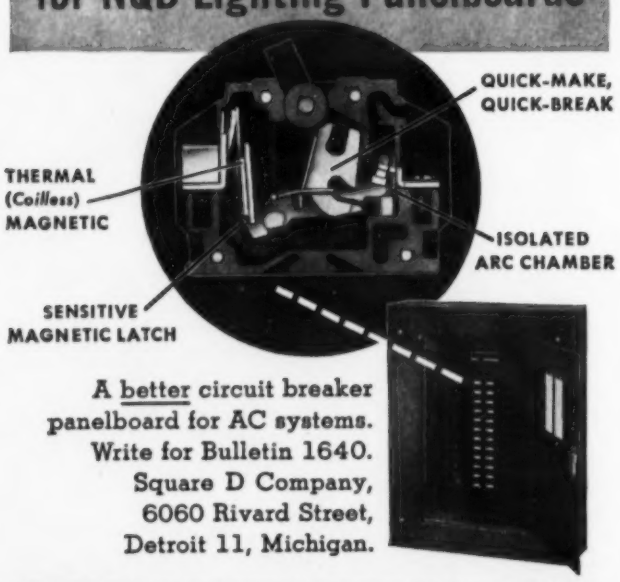
BUSHINGS MADE IN FOLLOWING SIZES: 3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

Write for Literature

STURDY BROACHING SERVICE
23514 TELEGRAPH RD., DETROIT 19, MICH.

For more details circle NED-6692 on enclosed inquiry slip

NEW TYPE QB CIRCUIT BREAKER for NQB Lighting Panelboards

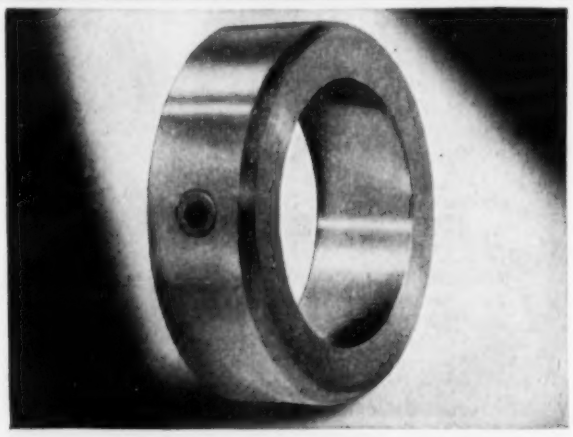


A better circuit breaker panelboard for AC systems. Write for Bulletin 1640. Square D Company, 6060 Rivard Street, Detroit 11, Michigan.

ASK YOUR ELECTRICAL WHOLESALER FOR SQUARE D PRODUCTS

SQUARE D COMPANY

For more details circle NED-6693 on enclosed inquiry slip



Standardize on standard HALLOWELL SOLID STEEL COLLARS

It's fast and easy to buy standardized, precision-made HALLOWELL Solid Steel Collars from your distributor's stocks. Just pick up the telephone and place your order. 42 stock sizes—for shafts from 3/16" to 3" inclusive—are positioned on the shafts by UNBRAKO Self-Locking Set Screws, the screws that won't work loose.

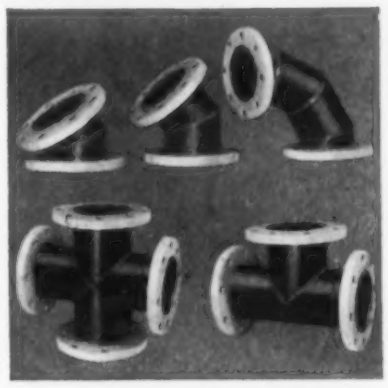
Write for descriptive literature and the name and address of your nearest HALLOWELL Industrial Distributor. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

HALLOWELL POWER TRANSMISSION DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-6694 on enclosed inquiry slip

New Processes & Materials

PLASTIC PIPE FITTINGS fully welded units are lightweight



Corrosion - resistant Agilene polyethylene flanged pipe fittings of fully welded construction, such as tees, crosses, and 45 and 90 degree elbows, can now be obtained in up to 6-in. nominal pipe sizes. In addition to their use in chemical pipe lines, sewage and waste installations, they find practical use in transmission lines for foods and drinking water and in irrigation systems. Fittings are made to standard dimensions of the American Standard Class 125 cast iron flanged fittings, and can be incorporated into existing pipe lines. Their lightweight allows easy installation. Made by **American Agile Corp.**, Dept. E, P. O. Box 168, Bedford, O.

For more details circle NED-6695 on enclosed inquiry slip

PROTECTIVE PACKAGING is light in weight and corrugated

Chippasac protective packaging, an all-corrugated product, combines light weight and quick sealing with a cushioning effect. Speed of use and physical protection are combined with protection against dirt and dust. Plain and printed forms in various weights of backsheets are stocked in several sizes; others are made to order. Made by **Chippewa Paper Products Co.**, 2427 S. Rockwell St., Chicago 8, Ill.

For more details circle NED-6696 on enclosed inquiry slip

MINIATURE WIRE has high dielectric strength cover

Impervious fused insulation used on Tensolon miniature wire has high dielectric strength and a high temperature rating. Wire is made by tensulation process using Du Pont Teflon in the form of multiwrapped and fused tape. Temperatures up to 250° C have no deteriorating effect on the covering, which is chemically inert and noninflammable. It is offered in 100-ft rolls in 30, 28, 26, 24 and 22 AWG in various types and strandings. Made by **Tensolite Insulated Wire Co.**, 196 Main St., Tarrytown 6, N. Y.

For more details circle NED-6697 on enclosed inquiry slip

INSULATION STAYS PUT on T & B Sta-Kon® Self-Insulated Terminals*

THERE'S A T&B ENGINEERED PRODUCT for every wiring job in the complete T & B line of fittings for all conductors and raceways

Nylon insulation on these new T & B Sta-Kon Self-Insulated Terminals is anchored by flaring of terminal barrel—and staking operation keys it in place to *stay*.

These new components end the risk of shorts between closely-mounted terminals. Insulation prevents metal-to-metal contact—withstands attack by gasoline, naphtha, hydraulic fluids. Shipped in one piece, assembled in one operation—with SHURE-STAKE Hand or Power Tools.

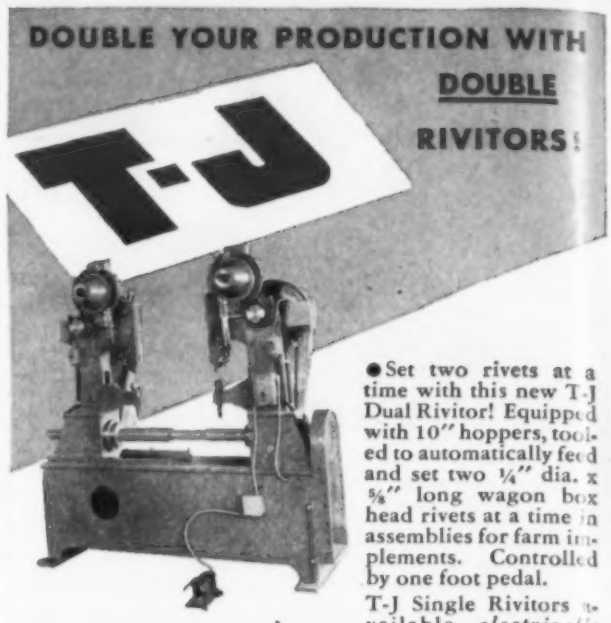
Engineered Right—Distributed Right. Sta-Kon Self-Insulated Terminals are typical of all T & B quality fittings designed for lowest installed costs. Furnished 100% through T & B distributors under the T&B Plan.

*Patent Pending

THE THOMAS & BETTS CO. INCORPORATED
24 BUTLER STREET, ELIZABETH 1, NEW JERSEY
Manufacturers of Electrical Fittings since 1898
Originators of self-insulated solderless terminals in 1935

For more details circle NED-6698 on enclosed inquiry slip

DOUBLE YOUR PRODUCTION WITH DOUBLE RIVITORS!



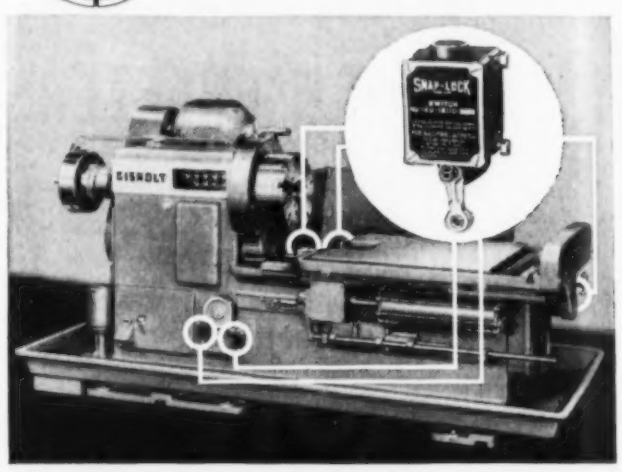
● Set two rivets at a time with this new T-J Dual Rivitor! Equipped with 10" hoppers, tooled to automatically feed and set two ¼" dia. x ⅝" long wagon box head rivets at a time in assemblies for farm implements. Controlled by one foot pedal.

T-J Single Rivitors available *electrically* powered for 1/16" to ¼" diam. solid steel rivets up to ⅞" long; *air-powered* for aluminum alloy rivets up to ⅛" diam. or steel rivets up to ⅛" diam., up to ¾" long. Throat depth, 8" to 36". Write for bulletins 646 and 847. The Tomkins-Johnson Co., Jackson, Mich.

36 YEARS' EXPERIENCE T-J
TOMKINS-JOHNSON
RIVITORS...AIR AND HYDRAULIC CYLINDERS...CUTTERS...CLINCHORS

For more details circle NED-6699 on enclosed inquiry slip

GISHOLT ANOTHER IMPORTANT MEMBER OF THE SNAP-LOCK 90%*



GISHOLT SPECIFIES SNAP-LOCK LIMIT SWITCHES FOR DEPENDABLE AUTOMATIC OPERATION OF THE SIMPLIMATIC LATHE

Here is another example of the need for dependable limit switch operation under exacting conditions of heavy-duty service.

The limit switches employed to control certain of the motions in the completely automatic cycle of the Gisholt Simplimatic Automatic Lathe are a critical factor in the satisfactory operation of the machine.

Snap-Lock was Gisholt's logical choice—and five separate uses of it are made on the Simplimatic: three to control tool slides, one to control the spindle during retraction of the platen table, and one to engage the second speed when a two-speed drive-motor is used.

Profit by Gisholt's example. When you want dependable limit switch operation, specify Snap-Lock. There is a size and type to suit every industrial application; special mountings are available. May we show you how they can be designed into your product?

The complete range of Namco Standard Snap-Lock Limit Switches is illustrated and tabulated in our new engineering bulletin EM-51. Ask for your copy.

*More than 90% of America's leading machine tool builders have standardized on Namco Snap-Lock Limit Switches—for dependable operation under the extremes of heavy-duty service.

ELECTRICAL MANUFACTURING DIVISION
182 East 131st Street • Cleveland 8, Ohio

THE NATIONAL ACME CLEVELAND, OHIO

For more details circle NED-6700 on enclosed inquiry slip

Serving **INDUSTRY**

SINCE 1887

WASHERS and STAMPINGS

Standard and Special Washers, of every description, any material, any finish, utilizing more than 22,000 Sets of Dies.

Let us Quote on Your Needs.

WROUGHT WASHER MFG. CO.
THE WORLD'S LARGEST PRODUCER OF WASHERS
2256 SOUTH BAY STREET • MILWAUKEE 7, WISCONSIN

For more details circle NED-6701 on enclosed inquiry slip

Safety **STEEL STEP LADDERS**

FOR EVERY NEED

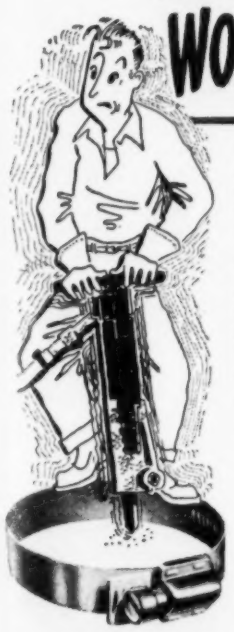
With safe, sure footing anybody reaches high places easier, with a sense of security that permits complete freedom of action to get the job done. Ballymore Ladders are sturdy and safe, can't roll when in use or kick out, have lots of foot room, strong hand rails. All welded construction. Ball bearing casters permit easy movement without lifting. One to three steps without hand rails. Three to eight steps with hand rails. "Special" models.

WRITE TODAY FOR COMPLETE CATALOG

BALLYMORE CO
WAYNE 3, PA.

For more details circle NED-6702 on enclosed inquiry slip

AERO-SEAL WORM-DRIVE HOSE CLAMPS
WON'T SHAKE LOOSE!



Wherever you have to clamp a hose connection tight . . . or wherever you want to lock two objects of any shape together in an unshakeable bond . . . your best bet is AERO-SEAL.

Threads of steel worm engage deep into slots in stainless steel band — hold tight under extreme vibration in automotive, aircraft and industrial applications. CAN'T SHAKE LOOSE.

One-Hand Installation
Install an Aero-Seal any place you can reach with thumb and one finger. Self-feeding when band engages worm threads. Thumb-grip and screwdriver types.

Re-use Again and Again
When hose is worn you RE-USE the same Aero-Seal again and again. RE-USE Aero-Seals on temporary clamping jobs—they conform to any shape without damaging band.

Use of stainless steel subject to government regulations.

"Aero-Seal"® WORM DRIVE **HOSE CLAMPS**
ANOTHER BREEZE MARK PRODUCT
BREEZE CORPORATIONS, INC.
41 South Sixth St. Newark, N. J.

For more details circle NED-6703 on enclosed inquiry slip

New Processes & Materials

COLD-PUNCHED NUTS offered in various types, materials

UL-approved conduit locknuts, square or hexagon machine screw nuts and electrical fixture nuts are among types made of steel, plated or unplated brass and stainless steel by cold-punch method. Special types are made to specifications. All are made in bulk quantities only. Samples available from **Jacobson Mfg. Co.**, Dept. G, Kenilworth 3, N. J.

For more details circle NED-6704 on enclosed inquiry slip

WATERPROOF TAPE has good tensile strength

Specifications for type I Grade A industrial tape under JAN-P-127 are met by No. 329 tape which is virtually 100 per cent waterproof. It provides an almost perfect barrier against moisture vapor and has good tack, adhesion and tensile strength. Tape is offered in olive drab, black, red and other government specification colors. Made by **Kendall Co.**, Bauer & Black Div., Polyken Industrial Tape Dept., 222 W. Adams St., Chicago 6, Ill.

For more details circle NED-6705 on enclosed inquiry slip

FLOOR PATCH MATERIAL takes 20-ton loads within 10 minutes

Holes or fissures in wet or dry cement, concrete, asphalt, brick or mastic floors can be repaired with Das-Patch fast-setting floor patch material which con-

tains both metallics and pure rubber latex. Hole is first swept clean and brushed at the depth and sides with primer. Then plastic filler is poured into hole and tamped level. Within five to ten minutes after tamping, truckloads up to 20 tons can be driven over patch without danger of powdering, rolling or releasing of patch in any way. Mixing or adding water are not required since material is used as it comes from container. Developed by **Dasco Chemical Co.**, 1602-04 Thames St., Baltimore 31, Md.

For more details circle NED-6706 on enclosed inquiry slip

"Canton"
THE LOW COST CRANE with a HUNDRED USES
Just one of a hundred lifting and transporting jobs made easy with a CANTON Portable Crane. Loads up to 3 tons can be moved anywhere in the shop by one man.

The **HILL ACME CO.**
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

For more details circle NED-6707 on enclosed inquiry slip

SPEED HAND-LABELING ON HARD-TO-LABEL JOBS with
Mystik *Self-Stik* **LABELS**

SPEED PRODUCTION—No moistening. Stick instantly.

EASY APPLICATION on hard-to-reach, hard-to-label surfaces.

FLEXIBLE and stretchable for curved or uneven surfaces.

PERMANENT—Resistant to stain, moisture, scuffing, delamination. Removable, if desired, without staining.

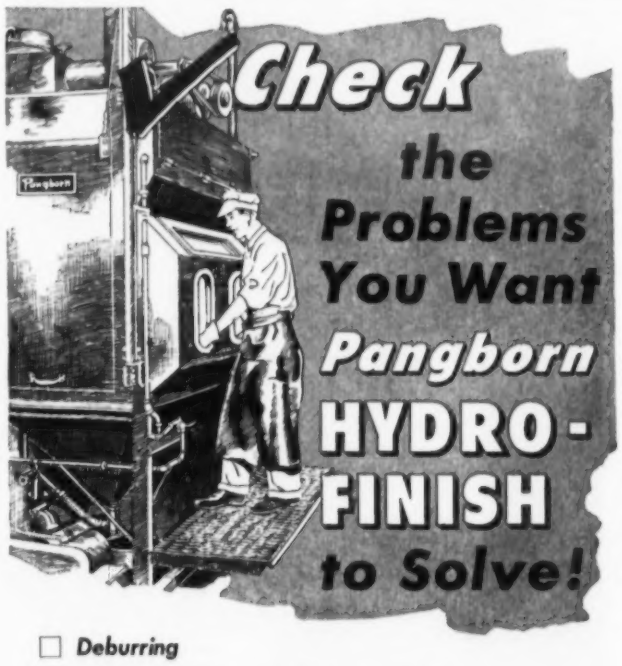
BEAUTIFUL—Finest color printing; die-cut; embossed; varnished or acetate laminated.

The outstanding qualities of MYSTIK LABELS are due to rubber-saturated stock and the strongly bonded rubber adhesive, providing strength, flexibility, toughness, strong adhesion and ease of handling. Write for full information and samples.

CHICAGO SHOW PRINTING COMPANY
CHICAGO • NEW YORK

2657 NORTH KILDARE • CHICAGO 39

For more details circle NED-6708 on enclosed inquiry slip



- ☐ *Deburring*
- ☐ *Surface finishing, lubrication control*
- ☐ *Removing heat treat scale*
- ☐ *Preparing surfaces for electroplating*
- ☐ *Removing and blending grinding lines*
- ☐ *Finishing threaded sections for fit*
- ☐ *Improving die manufacturing and maintenance*
- ☐ *Improving cutting tool life and appearance*
- ☐ *General maintenance cleaning*

The amazing versatility of Hydro-Finish, Pangborn's modified form of impact blasting using an abrasive suspended in liquid, will solve these and other problems for you! By varying abrasive size and hardness, air pressure, distance from work, and ratio of liquid to abrasive, almost any type of precision finishing can be accomplished faster and better!

For example, with Hydro-Finish on your production line, surfaces hold electroplating better . . . paints, rubber and plastics are bonded better because Hydro-Finish forms a "tooth" on your work. Threaded pieces turn more easily. Dies are cleaned better, surfaces are improved, production is speeded, and tools last longer.

Get the facts! Write today for Bulletin 1400A and learn how Hydro-Finish can help you! Address: PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

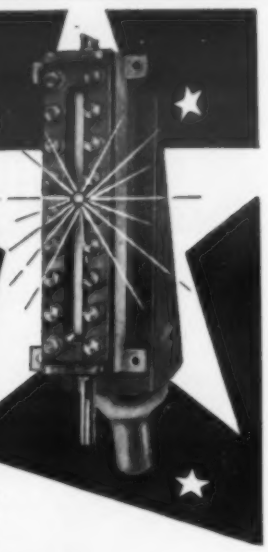
Pangborn

BLAST CLEANS CHEAPER with the right equipment for every job

For more details circle NED-6709 on enclosed inquiry slip

BOILER WATER LEVEL

Shines like a Star



With NEW YARWAY ILLUMINATOR

Get *positive* water gage readings. New Yarway illuminator spots meniscus at any point in its range. Superior penetration of blue-white light cuts through foreign deposits on gage glasses, extraneous light and dust particles. Use on new or already-installed Yarway Flat Glass Gages. Full details on request.

Yarnall-Waring Co., 131 Mermaid Ave., Phila. 18, Pa.

YARWAY *Branch Offices in Principal Cities*

For more details circle **NED-6710** on enclosed inquiry slip

IDEAL STENCIL MARKING EQUIPMENT

YOUR CUSTOMER ANY CITY U.S.A.

...PUTS "WINGS" on your SHIPMENTS

IDEAL STENCIL MACHINE CO.

134 Iowa Ave., Belleville, Ill.

For more details circle **NED-6711** on enclosed inquiry slip

POSITIVE TOOL STEEL IDENTIFICATION

WITH THIS NEW *12-Color Chart!*

Now . . . to help you eliminate costly tool steel mix-ups, Carpenter Matched Tool & Die Steel bars are painted FULL LENGTH with distinctive colors! This *practical* marking system, along with this new Wall Chart printed in colors that match the completely-painted bars, enables you to . . .

QUICKLY IDENTIFY TOOL STEELS!

REDUCE YOUR OWN MARKING COSTS!

AVOID COSTLY STOCK MIX-UPS!

SIMPLIFY INVENTORY-TAKING!

Tool Steel Selector and Identification Wall Chart — 21" x 30"—printed in *12 colors!* To cash-in on this new color-marking system, send for your Wall Chart, *now.* Just mail the coupon.

THE CARPENTER STEEL COMPANY

118 WEST BERN STREET • READING, PA.

Please send me the free Tool Steel Selector and Identification Wall Chart.

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

(PLEASE PRINT)

For more details circle **NED-6712** on enclosed inquiry slip

New Processes & Materials

MINING MACHINE CABLE cuts off power when it is damaged

Chance of shock hazard and arcing when a break occurs in portable mining machine cable is reduced by new cable that cuts off power the instant damage occurs to its positive conductor insulation. Cable is used in conjunction with a ground trip relay which, when energized, shuts off the power. Available for immediate use, it meets all requirements of Federal Mine Safety Code, schedule 2E of U.S. Bureau of Mines and Pennsylvania Act No. 206. Available from **Anaconda Wire & Cable Co.,** 25 Broadway, New York 4, N. Y.

For more details circle **NED-6713** on enclosed inquiry slip

PLASTIC PIPING is highly corrosion resistant

Line of plastic piping, tubing and ducting is for wide range of applications where corrosive liquids are handled up to temperatures of about 175° F. Piping is made in various grades of polyethylene, both unplasticized and rigid polyvinyl chloride, and rigid rubber-resin types in diameters up to 6 in. Polyethylene ducting is available in various standard sizes up to 22 in. diameter. Line of pipe fittings is available for use with above items. All materials have good mechanical and electrical properties, making them suitable for conduit application. Made by **American Agile Corp.,** Dept. E, P. O. Box 168, Bedford, O.

For more details circle **NED-6714** on enclosed inquiry slip

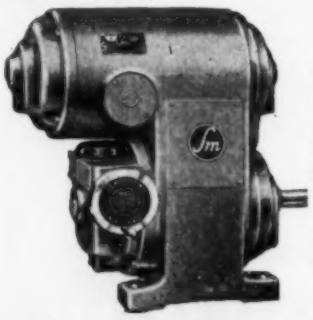
LIGHTWEIGHT CARBON PAPER has treated back to end curling

Increased copy potential and durability are features of Beautyrite lightweight carbon paper designed for multicopy work on electric and other hammerblow typewriters. Special coating ingredients and method for applying them give the paper 20-copy legibility and minimize smudging and offset. A non-slip treated back prevents curling and, combined with cut corners and uncoated edges, provides for clean, easy handling. Carbon paper is packed in handy dispenser box which simplifies typing pack assembly and alignment. Each folder features the Magic Spot which allows typists to pick up single carbon sheets without touching their inked surfaces. Made by **Remington Rand Inc.,** Dept. NED, 315 Fourth Ave., New York 10, N. Y.

For more details circle **NED-6715** on enclosed inquiry slip

POWER COSTS CUT 15% MAINTENANCE CUT 75%

Modernization of our multiple spindle drilling machine with a Speed-Trol drive, reports Mr. William L. Thomas, Plant Engineer of Utica Drop Forge & Tool Corp. of Utica, N. Y., enables us, for the first time, to utilize the full productive capacity of this machine. Power costs were cut 15%, maintenance was reduced 75%. We are able to adjust speeds quickly and accurately to correct drilling requirements with Sterling's fingertip control of speed.



70 ILLUSTRATIONS showing how Sterling Electric Power Drives reduce production costs. Write for Bulletin No. A-128.

STERLING SPEED-TROL GIVES YOU VARIABLE SPEED CONTROL NECESSARY FOR:

Equipment adaptation to: Sequence synchronization—operators' abilities—load variations due to differences in quantity, quality, weight, size, tension, hardness or shape of material to be processed, machined, conveyed, blended, mixed, etc.

Process control of: Temperature—viscosity—level—pressure—flow—etc.

Time control of: Baking—drying—heating—cooking—pasteurizing—soaking—chemical action—etc.

With Speed-Trol you get the maximum in production, plant efficiency, quality and profit.

STERLING ELECTRIC MOTORS

Plants: New York City 51; Van Wert, Ohio; Los Angeles 22; Hamilton, Canada; Santiago, Chile. • Offices and distributors in all principal cities.

For more details circle **NED-6716** on enclosed inquiry slip

TWO BIG EXTRAS you get in COFFING CHALLENGERS

EXTRA SAFETY You can depend on Coffing Challengers to fully protect men and equipment. All load-holding parts are designed to withstand five times rated capacity of the hoist. Each Challenger is factory tested at 100 percent overload.

LOW COST MAINTENANCE Heavy-duty construction keeps the Coffing Challenger on the job – assures long life. Formed steel housing withstands impact and shock loads as only steel can. And the Challenger may be completely disassembled in minutes with ordinary tools.

For more information on Challengers and other products listed below, write Dept. X7C.

Sold by Distributors Everywhere

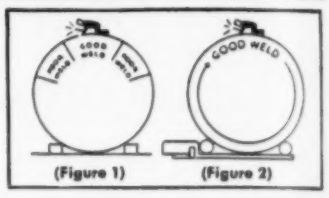
COFFING HOIST COMPANY

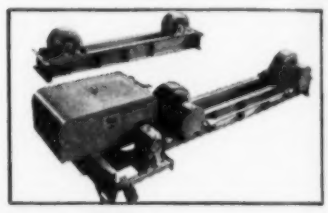
DANVILLE, ILLINOIS

Hoist-Alls • Mighty-Midget Pullers • Spur-Gear Hoists • Differential Chain Hoists • Load Binders • I-Beam Trolleys • Quik-Lift Electric Hoists

For more details circle **NED-6717** on enclosed inquiry slip

How Worthington Turning Rolls insure BETTER WELDS





Designed for use in welding cylindrical vessels of any size, Worthington Turning Rolls will insure the best possible weld while lowering costs and increasing footage up to 50%.

The above sketches show how. Unless work is turned continuously, good downhand welding is obtainable only in a small area (Fig. 1). With a Worthington Turning Roll, downhand welding is assured for the complete circumferential seam (either by manual or automatic welding) (Fig. 2).

Write for Bulletin 210C. Worthington Corporation, Plainfield, New Jersey.

Y.2.2

WORTHINGTON

Welding Positioners—Turning Rolls

For more details circle **NED-6718** on enclosed inquiry slip

CAN YOU MATCH THESE SPEEDS FOR CUT-OFF TIME?

2" Steel Bar Stock.....15 Seconds

2" Steel Tubing, 3/32" Wall.....10 Seconds

2" Angle Iron, ⅛" thick, 45° Angle.....8 Seconds

If you can't match these records with present equipment, you owe it to yourself to investigate THE CINCINNATI Wet Abrasive Cut-Off Machine. Handles any metal; capacity up to 2¼" in solids, 3½" in tubing. Exclusive coolant nozzle insures proper flow for longer wheel life. Foot-operated vise frees operator's hands for greater efficiency.

Write today! Ask for name of your distributor or Bulletin 52 WO.

TRADE *The Cincinnati* MARK

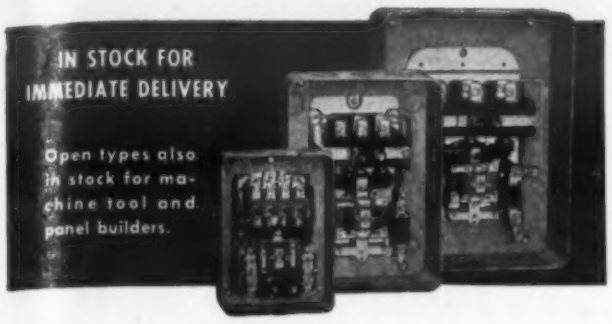
THE CINCINNATI ELECTRICAL TOOL CO.

Division of THE R. K. LeBLOND MACHINE TOOL CO.

CINCINNATI 8, OHIO

For more details circle **NED-6719** on enclosed inquiry slip

NOW! WARD LEONARD Motor Starters



Order now from Ward Leonard's line of across-the-line-type non-reversing a-c magnetic starters. Four standard sizes: 0, 1, 2, 3.

Compact unit construction. Complete accessibility of parts. Simplified installation and inspection. High current interruption capacity. Thermal overload protection. Long, trouble-free operating life. Open or enclosed type.

Write for Starter Bulletin 4110. WARD LEONARD ELECTRIC CO., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS · RHEOSTATS · RELAYS · CONTROL DEVICES

▲ For more details circle **NED-6720** on enclosed inquiry slip ▲

Clipper
BELT LACING EQUIPMENT
For Belts and Tapes 1/16" to 3/8" thick

Industry's Most DEPENDABLE Belt Joints

Proven by use and comparison, Clipper Belt Hooks assure longest service. Made from uniformly high quality, fatigue resisting wire produced exclusively to meet our rigid specifications. For easy application and maximum uninterrupted service, use GENUINE Clipper Belt Lacers. There is a type and size for your needs.

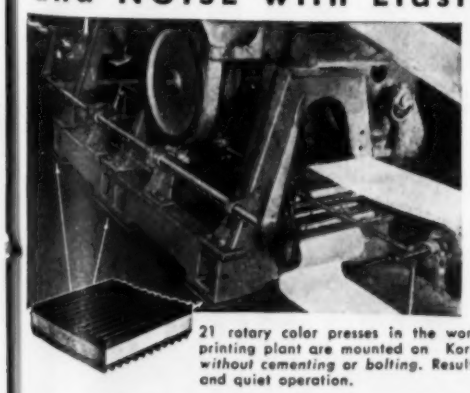
No. 9 Portable Lacer

Ask your Mill Supply Jobber for CLIPPER Products.

CLIPPER BELT LACER CO.
Grand Rapids 2, Michigan

▲ For more details circle **NED-6721** on enclosed inquiry slip ▲

It's SIMPLE To Control VIBRATION and NOISE with Elasto-Rib...



NO BOLTING

NO CEMENTING

LOW COST

21 rotary color presses in the world's largest label printing plant are mounted on Korfund Elasto-Rib—*without cementing or bolting.* Result—perfect register and quiet operation.

Elasto-Rib effectively stops transmission of vibration and noise by utilizing the elastic and damping properties of both cork and rubber.

It is fast and easy to install. For most machine applications, no bolts, lag screws or cement are required. Sheets 24" x 36" can be sawed or cut to size as needed.

New, illustrated booklet tells all about Elasto-Rib and how to install it. Ask for ER-701 and free sample.

THE KORFUND COMPANY, INC.
KORFUND VIBRATION CONTROL — SPRINGS · RUBBER · CORK
48-35P Thirty Second Place, Long Island City 1, N. Y.
In Canada: 510 Canal Bank, Ville St. Pierre, Montreal

▲ For more details circle **NED-6722** on enclosed inquiry slip ▲

New Processes & Materials

GLASS FIBER PANELS can be sawed or nailed like wood

In addition to the original translucent fiber glass building panel (top section) which admits light without being transparent, this lightweight sheeting is now available in opaque and transparent forms as shown center and bottom. These shatterproof sheets can be sawed or nailed like wood and can be used in any number of decorative and structural applications. Product is made by **Alsynite Co. of America,** Dept. 12, 4654 De Soto St., San Diego 9, Calif.

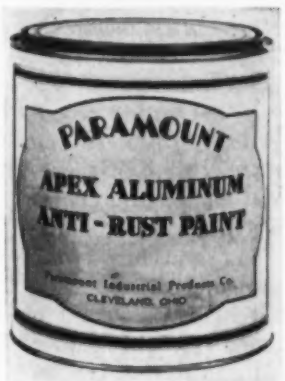
▲ For more details circle **NED-6723** on enclosed inquiry slip ▲

DEAD CENTER LUBRICANT minimizes seizing and galling

Lubrication of dead centers where loads and speeds are beyond capacity and temperature ranges of conventional center lubricants is assured with use of Molykote-Centerlube. Basic ingredient is Molykote type Z, a lubricating grade of molybdenum disulfide powder which bonds a lubricating film on bearing surfaces and imparts low friction and antiseizing properties needed to resist extreme bearing pressures and temperatures. Product will also reduce wear on plug and thread gages and lubricate steady rests, press fitting, heavily loaded gears and ways and gibs of machine tools where danger of seizing and galling exists. Developed by **Alpha Corp.,** 177 Hamilton Ave., Greenwich, Conn.

▲ For more details circle **NED-6724** on enclosed inquiry slip ▲

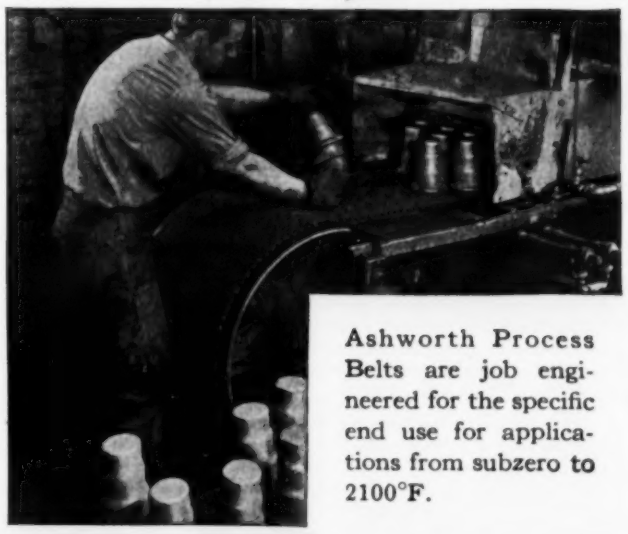
ANTIRUST PAINT applied over rust without scraping



Wire brushing or scraping is not required before applying Apex aluminum antirust paint over rust. It can be used indoors or out on any type of metal. Finish penetrates and seals the surface to stop further rust action. Paint resists temperature changes, moisture, industrial chemicals and gases and covers in one coat. Made by **Paramount Industrial Products Co.,** University Center Station, Cleveland 6, O.

▲ For more details circle **NED-6725** on enclosed inquiry slip ▲

Metal Conveyor Belts
FOR
POWDER METALLURGY
BRIGHT ANNEALING
COPPER BRAZING
by ASHWORTH



Ashworth Process Belts are job engineered for the specific end use for applications from subzero to 2100°F.

WRITE FOR ILLUSTRATED CATALOG 52D

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chattanooga • Chicago • Cleveland • Detroit • Los Angeles • New York • Philadelphia • Pittsburgh • Seattle
Canadian Rep., PECKOVER'S LTD. . Toronto . Montreal

▲ For more details circle **NED-6726** on enclosed inquiry slip ▲

An Outstanding Record of Acceptance!

LESLIE
Floatless
LEVEL CONTROL

Installation on five 90000 kw generator condensers, in service 12 months—led to 16 more installations for same company—typical of the fast growing acceptance of this rugged and accurate level control.

ADVANTAGES
- EASY TO INSTALL
- ACCURATE REGULATION (±1" WATER COLUMN)
- NO FLOATS, STUFFING BOXES, ETC.
- DIAPHRAGM PRESSURE ELEMENT
- ACTION REVERSIBLE

SEND for illustrated bulletin

LESLIE CO., 227 Grant Avenue, Lyndhurst, New Jersey 1970

▲ For more details circle **NED-6727** on enclosed inquiry slip ▲

hit the pin...
the rivet's in

simplify... speed assembly... cut costs

For substantial savings . . . do your blind riveting with Southco Drive Rivets. Get vibration-proof, tight-grip fastenings faster, cheaper than you ever thought possible.

Over a wide range of applications . . . from light electronic assemblies to heavy truck panels . . . the job is done when the pin is hit. A fast job, but good. The "pull-up" is perfect. There's no pulling, no bucking-up, nothing to finish off, no trimming or grinding, and no tool maintenance.

Investigate! Let us help you figure how much you can save with Southco Drive Rivets. For complete data write Southco Div., South Chester Corp., 1413 Finance Bldg., Philadelphia 2, Pa.

Important for military contractors! Prompt deliveries now possible because of recently expanded plant facilities.

SOUTHCO®
FASTENERS

PAWL, SCREW AND SPRING • DRIVE RIVETS
ANCHOR NUTS • ENGINEERED SPECIALTIES
OFFICES IN PRINCIPAL CITIES

WHEREVER TWO OR MORE PARTS ARE FASTENED TOGETHER, STANDARD AND SPECIAL DESIGNS FOR IMPROVED PERFORMANCE AND LOWER PRODUCTION COSTS

▲ For more details circle **NED-6728** on enclosed inquiry slip ▲

It's Easy...with WITTEK Roll Feeds and Reel Stands

Wittek Roll Feeds handle any type of coiled strip stock and are made in single roll, double roll, and compound types with straighteners, in models to feed in any of four directions. They are reliable and accurate with simple, quick adjustment of feed length. Standard sizes and models meet a wide variety of press size and capacity conditions.

Wittek Reel Stands facilitate handling coiled stock.

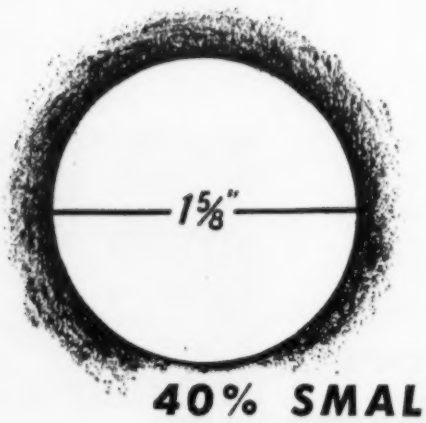
Write for full particulars

WITTEK Manufacturing Co. Automatic ROLL FEEDS AND REEL STANDS

4325 W. 24th Place, Chicago 23, Illinois

For more details circle NED-6729 on enclosed inquiry slip

YOU NEED ONLY THIS SIZE SPACE FOR STERLING INDICATING METERS



40% SMALLER THAN FORMER MODELS

Typical of Sterling's ability to produce just the right meter for your needs at moderate cost is this new small unit for A-C or D-C service. Available in ranges of 1 to 50 V, 1 to 30 amp, and 10 to 1,000 milliamperes—with high readability and accuracy. In dull, black, wrinkle or nickle finishes. Write today for complete facts.

Send for a Sterling catalog today — a complete line of meters for the electronic and automotive field.

STERLING
MANUFACTURING COMPANY
9202 DETROIT AVE.
CLEVELAND, OHIO

For more details circle NED-6730 on enclosed inquiry slip

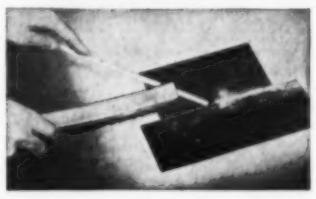
New Processes & Materials

COATED FABRIC
synthetic rubber adds durability

Applicable as protective covering for machinery, apparatus and other equipment as well as for weatherproof carrying cases and other purposes, Coverlight synthetic rubber coated fabric weighs only 5½ oz per sq yd yet has high tensile strength. It resists puncture and tearing, and withstands temperatures ranging from −65 to 250° F. Offered in orange yellow and olive drab colors, fabric is made by **Vulcan Rubber Products, Inc.**, 5710 First Ave., Brooklyn 20, N. Y.

For more details circle NED-6731 on enclosed inquiry slip

GALVANIZING COATING
replaces burned off galvanizing



Bonding permanently to most metals without use of flux, sandblasting or cleaning, Galvalloy galvanizing coating material is used to replace coating that is burned off by the welder's torch. By bonding to magnesium, aluminum and pot metal, it is being used to salvage parts that otherwise would be scrapped. Offered in 14-in. bars, it is applied by rubbing on a preheated surface and will not peel, burn or chip off. Other applications include protection and smoothing of welds, bonding hard-to-join metals without flux and repair of corroded areas in degreasing tanks. Made by **Metalloy Products Co.**, 1355 E. Seventeenth St., Los Angeles 21, Calif.

For more details circle NED-6732 on enclosed inquiry slip

INDUSTRIAL WOOD PANELS
for furniture, cabinets, novelty use

Three wood panel products for application in furniture, store fixtures, cabinets, displays, toys, novelties and other consumer goods are now available on bases of ⅛ and 3/16-in. Tempered Duolux. First is industrial Marlite woodpanel having baked grain coating with glass-smooth, yet flexible factory-applied surface finish. Surface is baked for maximum solvent, water and mar resistance. Second is woodpanel to which has been applied baking sealers and ground coats as base for factory application of graining ink. Both are available in red mahogany, brown walnut, natural prima vera, gray prima vera, blond mahogany, silver walnut, light oak and limed oak baked grains. Third product is panel coated with primer surface of baked, modified light yellow resin finish to which any type oleoresinous varnish, lacquer or enamel, both air or force dried and baked, can be applied. Made by **Marsh Wall Products, Inc.**, Dept. F, Dover, O.

For more details circle NED-6733 on enclosed inquiry slip

Chem-Board Tote Boxes HELP ARMAMENT PROGRAM

All kinds of materials, parts and sub-assemblies are flowing to production lines efficiently and economically in Convoy Chem-Board Tote Boxes to speed the armament program in plants from coast to coast.

Chem-Board is made of corrugated fibre-board, chemically impregnated by Convoy's exclusive process. It is flint hard and rock strong. It is not weakened by moisture. It is impervious to machine oils. Convoy Tote Boxes cost and weigh 50% to 60% less than steel.

The lightness, toughness and economy of Chem-Board Tote Boxes are unmatched. Tell us the style you use . . . we'll send a free production sample from the next run for you to test. As a guide for present and future availability, our current production capacity is reserved for the unprecedented demands from old customers and "DO" orders. Orders rated DO-MRO are acceptable. Write today.

Standard and Custom-made Nesting—Stacking—Vertical CHEM-BOARD TOTE BOXES

CONVOY, INC.
P.O. Station B. Box 216-N
CANTON 6, OHIO

For more details circle NED-6734 on enclosed inquiry slip

MILLIONS OF GALLONS OF LIQUIDS ARE ACCURATELY MEASURED EACH YEAR BY THESE . . .

. . . BOWSER XACTO METERS

Wherever precision measurement is essential to assure constant uniformity of product—control costs, or simplify handling of liquids—there you will usually find Xacto meters on the job.

Right now—in many plants of all types—Bowser Xactos are efficiently handling 662 different liquids.

It will pay you to consult with your nearby Bowser representative.

BOWSER, INC.
1381 Creighton Ave., Fort Wayne 2, Ind.

BOWSER Regional Offices • Atlanta • Chicago • Cleveland • Dallas • Kansas City • New York • San Francisco • Washington, D. C. • Hamilton, Ontario

For more details circle NED-6735 on enclosed inquiry slip

Solves
MANPOWER PROBLEMS
Shepard Niles Electric Hoist

One man replaces many — and moves more goods faster — with a Shepard Niles Electric Hoist. These sturdy hoists free valuable floor space, put waste ceiling area to work, enable an older man, woman or youth to handle the heaviest loads with ease.

Learn how a Shepard Niles Hoist — in light, medium or heavy capacity — fits into your production picture. Call in the Shepard Niles representative — he'll make sure you get the right capacity and controls for your handling job. Write today for Bulletins 127 and 171 and ask to have a representative stop by.

- **HOISTS** Operated from Cab, Floor or Pulpit.
- **CRANES** Overhead: Top Running, Inner Running, Under Running, Floor or Cab Operated.

Specialists in loads through-the-air since 1903.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1815 SCHUYLER AVENUE • MONTOUR FALLS, N. Y.

For more details circle NED-6736 on enclosed inquiry slip

MILLIONS
IN STOCK FOR IMMEDIATE DELIVERY

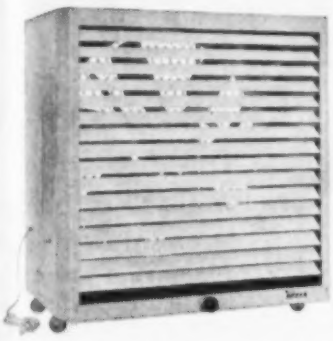
all popular sizes with nuts. Steel or brass, slotted or Phillips head.
Maximum discounts.
Write—Wire—Or Phone!

STERLING BOLT CO.
389 WEST ERIE STREET • CHICAGO 10, ILLINOIS
Telephone: SUperior 7-3000 Teletype: CG 488
Cincinnati, Indianapolis, Milwaukee, St. Louis

For more details circle NED-6737 on enclosed inquiry slip

powerful cooling
when and where you want it!

Reed PORT-O-VENT AIR CIRCULATOR



The *tested* and *proven* answer to on-the-spot man-cooling problems! Thousands in use in plants, factories, offices everywhere. Reed Port-O-Vents are highly mobile, move *plenty* of air. All-steel construction, mounted on casters, heavy wire guards both sides, overload protected *reversible* motor. Extremely quiet and economical operation. Write today for full information.

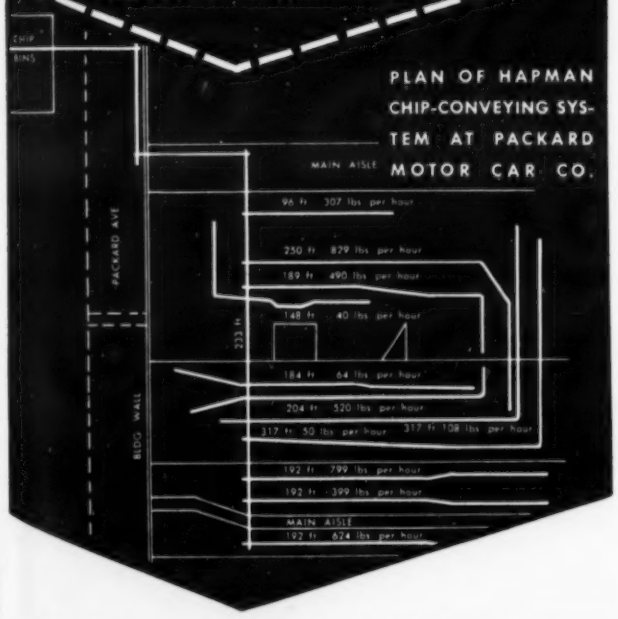
Certified Air Delivery Ratings
Fans Less Guards

24 Inch	4,500 CFM
30 Inch	7,250 CFM
36 Inch	10,050 CFM
42 Inch	12,000 CFM

FOR COMPLETE, DETAILED INFORMATION WRITE:
Reed UNIT-FANS, INC.
1001 St. Charles Ave., New Orleans, U. S. A.

For more details circle NED-6738 on enclosed inquiry slip

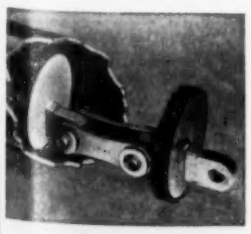
Packard makes savings "A MILE LONG" with Hapman TUBULAR CONVEYORS
removing metal Chips from scores of machine tools



This plant contains 5,366 feet of Hapman Conveyor, carrying chips in feeder and main lines. It's a full-scale example of advanced, cost-cutting planning — in action now!

So if cutting costs is one of your problems, you can't afford to overlook the tremendous savings possible with mechanized chip-handling!

With Hapman Tubular Sealed-pin Chain Conveyors, you remove wet or dry metal chips and dust directly from machines — and convey to storage *automatically* and *continuously*. Can you imagine the multiple savings that result?



We'd like to explain how you save *labor* on two counts — and boost *output* of machine tools on two counts. Write for details — the Hapman Way is a revolutionary advance in modern cost-cutting methods! Ask for Bulletin ND-752.

Hapman CONVEYORS, INC.
DIVISION HAPMAN-DUTTON COMPANY
KALAMAZOO MICHIGAN

For more details circle NED-6739 on enclosed inquiry slip

New Processes & Materials

BRAZING ALLOY
for copper, brass and bronze

Extreme fluidity and good wetting properties of Phos-Silver copper-phosphorous-silver brazing alloy enable it to penetrate tight-fitting joints instantly to form strong, ductile bonds. Alloy can be used with any common methods for brazing on copper and copper alloys. Its low brazing temperature (1225-1275° F) substantially reduces brazing time. No flux is needed in copper-to-copper brazing. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

For more details circle NED-6740 on enclosed inquiry slip

GLARE REDUCING PAINT
for industrial plant windows

Bright sunlight can be screened out and glare reduced in factory working areas by painting clerestory windows, skylights and clear glass fenestrations with light reflecting and diffusing Turquoise L421 paint. Applied on inside of glass for permanent finish, paint has light reflection value of 64 per cent. When used on outside of windows in early summer, its life is such that it will provide adequate protection from bright sunlight, but by fall, will start to wear off to allow weaker sun rays to pass through windows. Developed by **Luminall Paints**, 3608 S. May St., Chicago 9, Ill.

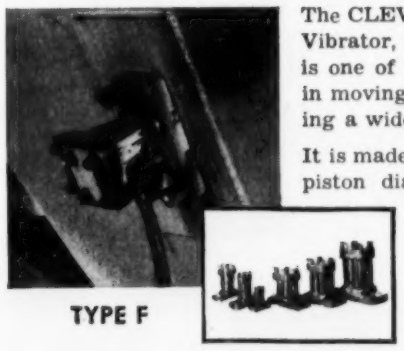
For more details circle NED-6741 on enclosed inquiry slip

STICK TYPE LUBRICANT
for machining, sanding, grinding

Reduction in frictional heat generated between tool and work in machining, sanding, grinding, polishing and forming operations is effected by Tool Saver stick type wax lubricant. It improves performance, lengthens life and preserves temper of tool. In many cases, machining burrs are eliminated. One pound of lubricant is supplied in "push-out" cardboard dispenser tube measuring 11 x 2 in. Application is directly to tool cutting edge or surface to be machined. Use can be on saw bands, knife bands, circular, hack and carpenter saws, twists drills, taps, reamers, etc. Available from **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

For more details circle NED-6742 on enclosed inquiry slip

AIR VIBRATOR
moves wide range of materials


TYPE F

The CLEVELAND Type F Air Vibrator, illustrated herewith, is one of the basic types used in moving, settling or packaging a wide range of materials.

It is made in 6 sizes, from 1¼" piston diameter to 4" piston diameter, capable of handling materials from the smallest chute, bin or hopper to the largest of bulk storage bins.

The Type F Air Vibrator can move steel chips; dry colors; concrete; and fertilizer. It works equally well on sand, coal and soap; chipped ice and meat; wood chips; and almost any other material which is inclined to plug up, arch or bridge.

The Type F is easily installed by mounting or bolting through the skin of the hopper and a reinforcing plate. This distributes the impact of the vibration over a wider area and prevents distortion of the hopper skin.

An air-cushioned semi-noiseless type is available where NOISE is a factor.

BIN Stuck Lately? Catalog No. 105 will give you further details. **The Cleveland Vibrator Co.**, 2745 Clinton Avenue, Cleveland 13, Ohio. Advt.

For more details circle NED-6743 on enclosed inquiry slip

TIGHT! ... but how tight?

Tight enough to shear off the nut ... wasting time and material? Or is it exactly right, precision tight?

There's never *any* question, with Apco Mossberg Torque Wrenches ... precise, pre-determined measurement of final tension on nuts and bolts is yours at a glance. Dial readings are instantaneous and unerringly accurate ... there are no springs or intricate parts to get out of kilter. Apco torque wrenches are lighter, easier to handle than any other wrench of comparable size and style ... narrow heads make work easy in awkward, hard-to-get-at places. Best of all, there's an Apco Torque Wrench for every job in the shop ... a complete range of sizes, from 280 inch grams to 2000 ft. pounds.

Write for complete information on Apco Mossberg Torque Tools today ... they're so *easy* to use, so *hard* to do without.

APCO MOSSBERG CO.
Attleboro, Mass., U.S.A.

For more details circle NED-6744 on enclosed inquiry slip

A positive seal

for OIL • GAS
FREON • BUTANE
STEAM • WATER

Pipetite provides a positive seal for joints regardless of the type of fluid or gas being used. It is the dependable joint compound that makes good workmanship and assures user satisfaction. To be absolutely sure of "no leaks" use Pipetite. If your supplier does not have it ... write direct.

LACO BRAND
LAKE CHEMICAL CO.
3050 W. Carroll, Chicago 12, Ill.

For more details circle NED-6745 on enclosed inquiry slip

Don't Handcuff That Engine!

STOP Costly Cylinder Wear with the UNIVERSAL TOP OILER

- Reduces Valve and Ring Failures
- Lowers Fuel Octane Requirements
- Reduces Oil and Gas Consumption
- Frees Sticking Valves
- Increases Payload Power

The Universal Top Oiler assures constant, uniform top cylinder lubrication on all types of internal combustion engines by metering vaporized top oil through the intake manifold. When used with an approved upper-cylinder lubricant, it neutralizes corrosive acids, stops carbon and gum formation, prevents dryness in the hottest, busiest part of the engine. Easy to install. List price: $8.95.

Provides maximum benefit when used continuously with Universal Top-Oil. Write for full details.

Gentlemen:
Please send complete information on the UNIVERSAL TOP OILER and the new Universal Top-Oil.

Name _____
Address _____
City _____

UNIVERSAL LUBRICATING SYSTEMS, INC.
792 ALLEGHENY AVENUE • OAKMONT, PA.

For more details circle NED-6746 on enclosed inquiry slip

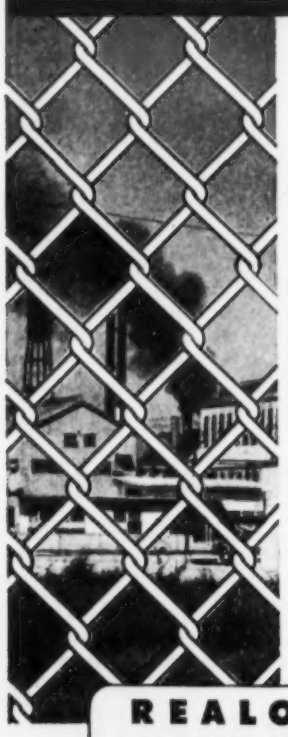
• With every press on the foot pedal the Model 214 Chicago Double Rivet Setter automatically feeds, inserts and clinches *two* rivets. 14-inch throat accommodates large assemblies. Handles 9/64" or smaller steel tubular rivets, ¾" or less in length. Quick Change Rotary Type Hoppers and Raceways permit a 5-minute changeover to rivets of different size. Adjustable anvils and riveting centers add to its versatility. For help with your specific fastening problem...send a sample of your problem assembly (or a blue print) for free fastening analysis.

FREE CATALOG *contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.*

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

For more details circle NED-6747 on enclosed inquiry slip

REALOCK FENCE



GIVES *Positive* PROTECTION

Positive protection for your grounds and property is assured with Realock Fence. In addition, all fittings, hinges and locking devices have bolts on the inside, secure from outside tampering.

Noted for its rugged construction and long-lasting weather resistance, Realock Fence can be depended upon for years of dependable, trouble-free service.

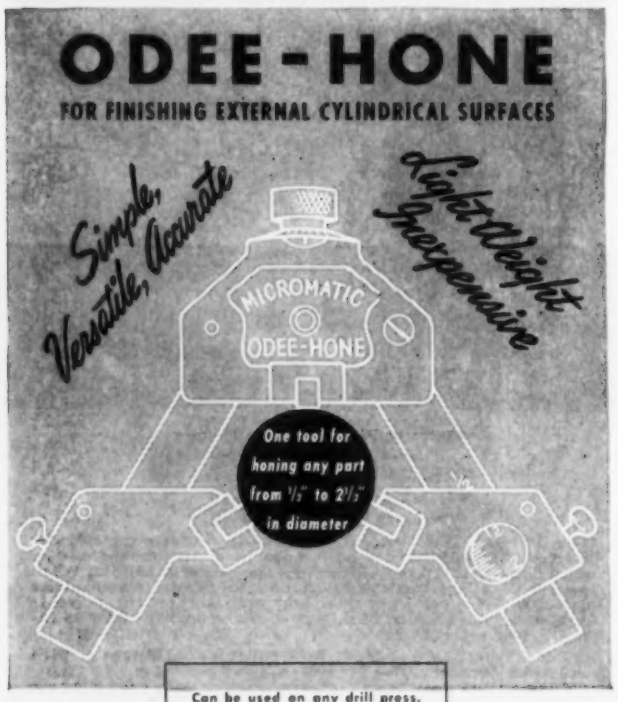
For additional information write our nearest sales office or consult your classified telephone directory.

THE COLORADO FUEL & IRON CORPORATION
Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION
Oakland, California
WICKWIRE SPENCER STEEL DIVISION
Buffalo, New York

REALOCK FENCE
THE COLORADO FUEL & IRON CORPORATION
CF&I
BRANCHES IN ALL KEY CITIES

For more details circle NED-6748 on enclosed inquiry slip

ODEE-HONE
FOR FINISHING EXTERNAL CYLINDRICAL SURFACES



Can be used on any drill press, lathe or electric drill.

Generates round, straight surfaces with any desired surface finish.

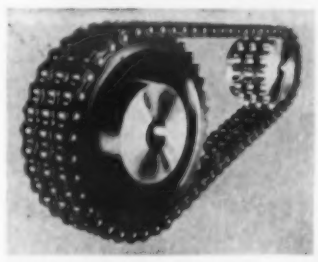
For complete information write or call

MICROMATIC HONE CORPORATION
8100 SCHOOLCRAFT • • • DETROIT 4, MICHIGAN

For more details circle NED-6749 on enclosed inquiry slip

New Processes & Materials

ROLLER CHAIN has oil-impregnated metal bushings



Little or no lubrication is required by Whitney roller chain which now incorporates oil-impregnated sintered metal bushings in some sizes. In a 20-hour test of standard prelubricated roller chain vs. oil-impregnated type, wear in form of elongation was 0.380 and 0.080-in., respectively. Chain can be used in areas containing grit or abrasive material where external oiling results in decreased service life. At present, sintered bushing chain production is limited to several sizes. Made by **Whitney Chain Co.**, 6 Hamilton St., Hartford 2, Conn.

For more details circle NED-6750 on enclosed inquiry slip

RUBBER-FILLED PHENOLIC has low modulus of elasticity

Flexible type phenolic molding compound, known as Durez 14780 Black, has a low modulus of elasticity, permitting its use for molding thin sections around inserts. It has a synthetic rubber filler and consequently absorbs shock. Material molds equally well by compression or closed mold molding and can be preformed in any automatic preforming equipment. Cure time is generally longer than for general purpose phenolics. Recommended molding temperatures are from 290 to 310° F. Flexural strength is 9000 psi minimum and tensile strength is 6000 psi minimum. Made by **Durez Plastics & Chemicals, Inc.**, 1910 Walck Rd., North Tonawanada, N. Y.

For more details circle NED-6751 on enclosed inquiry slip

CUP GRINDING WHEEL for finishing complicated shapes

Sharp cutting edge of this Hard-Shell cup grinding wheel is retained throughout its service life. Hard shell of tough resin-bonded abrasive is built around a core of rapid-cutting resin-abrasive. This shell is 3/16-in. thick and resists mushrooming or rounding of wheel's cutting edge. It is particularly suited to accurate grinding of hard-to-reach corners and complicated shapes. Overall diameter is tapered from 6 to 4¾ in. in its 2-in. thickness. Types are available for three standard arbors. Made by **United States Rubber Co.**, 1207 Rockefeller Center, New York 20, N. Y.

For more details circle NED-6752 on enclosed inquiry slip

DOWN TIME ON AIR-OPERATED EQUIPMENT With the HANNIFIN "AIR WARDEN"

High production schedules *DEMAND* continuous performance from air-operated equipment. So Hannifin developed the "Air Warden" as the finest protection possible.

One complete "Air Warden" unit FILTERS AIR — REGULATES PRESSURE — LUBRICATES —*Simultaneously!*

GET ALL THE DETAILS ON HANNIFIN'S MONEY-SAVING "AIR WARDEN"!
Components sold singly or in any combination. Write for literature.

HANNIFIN
Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Illinois

For more details circle NED-6753 on enclosed inquiry slip

Two fan sizes: 18 inch and 24 inch, capacities from 2000 cfm to 6400 cfm. Overall height 55½".

nyb PEDESTAL FAN
(Industrial Type)

Available for Prompt Shipment From Stock

Place this versatile fan in the most effective spot to deliver a gentle breeze or a brisk wind for a variety of uses. Safety guards front and rear with totally enclosed motors to meet State Industrial Safety Code Requirements. Bolted construction simplifies shipment, assembly and storage.

Write for Bulletins

FANS • BLOWERS • UNIT HEATERS • MAKE-UP AIR UNITS • HEAVY DUTY HEAT SURFACE

nyb THE NEW YORK BLOWER COMPANY
SALES OFFICES • 32nd STREET and SHIELDS AVENUE • CHICAGO 16
FACTORY, LAPORTE, INDIANA

For more details circle NED-6754 on enclosed inquiry slip

HASTELLOY alloy D valve castings can be obtained with an ultimate strength of from 110,000 to 125,000 psi and hardness as high as Rockwell C-48. These castings have excellent resistance to sulphuric acid, in addition to their high strength.

Some Penetration Tests for HASTELLOY Alloy D in Sulphuric Acid #

Conc., per cent by weight	20 deg. C.	70 deg. C.	Boiling Point
10	0.00019	0.0015*	0.0011
25	0.00011	0.0011	0.00074
60	0.0000074	0.00026*	0.0074
85	0.00019	0.0039	0.025
95	0.000064*	0.0007*	0.035

inches per month * aerated test

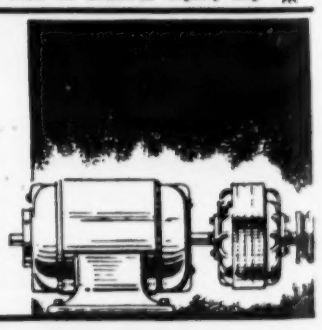
For information on HASTELLOY alloy D castings, and for the name of a manufacturer who can supply you with high-quality valves, write to our General Offices.

Haynes Stellite Company
A Division of Union Carbide and Carbon Corporation
UCC
General Offices and Plant: Kokomo, Indiana

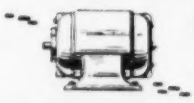
"Hastelloy" is a trade-mark of Union Carbide and Carbon Corporation.

For more details circle NED-6755 on enclosed inquiry slip

How to make BIGGER MOTORS



. . . out of SMALLER MOTORS . . .



Motors or engines do bigger jobs with Twin Disc's HYDRO-SHEAVE® Drive. Slipped on the end of the motor or engine shaft, they enable easy pickup of heavy loads, absorb shock loads, reduce belt wear, save motor burnouts, stalls. By use of HYDRO-SHEAVES, motors can often be selected for running load rather than starting load requirements. Let your Twin Disc Hydraulic Dealer show you, or write for Bulletin 145-B or a file of Installation Reports.

HYDRO-SHEAVE for motors and engines ¾ to 50 hp.

TWIN DISC
CLUTCHES AND HYDRAULIC DRIVES

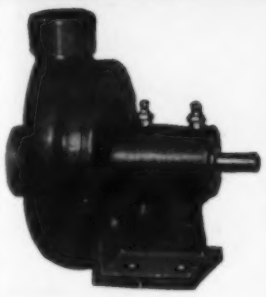
TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford Illinois
BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

For more details circle NED-6756 on enclosed inquiry slip

"FULFLO"

MAKE SURE YOUR COOLANTS HIT THE RIGHT SPOT TO KEEP TOOLS COOL

CENTRIFUGAL COOLANT PUMPS



MODEL AOR
Right rotation

MODEL AOL
Left rotation

Direct connection:
1600 to 2600 rpm; 5 gal. to 18 gal. per min.

WHETHER you need a drop or two or a constant stream, FULFLO PUMPS circulate coolants where and when needed. They prolong life of tools . . . especially important when so much is demanded to keep production humming.

WRITE on your letterhead for FULFLO MECHANICAL DATA BOOK.

FULFLO THE FULFLO SPECIALTIES CO. Inc.
BLANCHESTER, OHIO

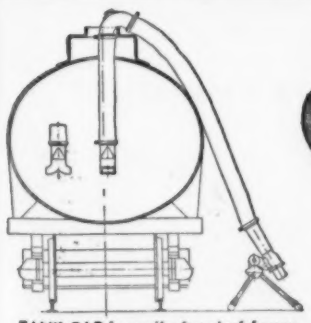
For more details circle NED-6757 on enclosed inquiry slip

FLOOR SCALES

Now—Toledo Floor Scales with new recessed frame design which fully guards against foreign material lodging beneath platform edge—choice of full or semi frame, with economical conversion for future needs. Double parallel link platform suspension means long life, accurate dependability. Send for bulletin 2406C. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO
HEADQUARTERS FOR SCALES

For more details circle NED-6758 on enclosed inquiry slip



TANK CAR is easily freed of fumes for workers' safety.

CHEMICAL STILL is here ventilated while being repaired.

KEEP AIR FRESH
in confined places with COPPUS
Design "A" Ventilator

Improve workers' safety—health—comfort—efficiency. Get rid of dangerous gases, fumes, stagnant air. Coppus Design "A" Ventilator ventilates tanks, tank cars, drums, vats, underground cable manholes, pipe galleries, airplane wing compartments, fuselages. For complete information, write Coppus Engineering Corporation, 407 Park Ave., Worcester 2, Mass. Sales Offices in *Thomas' Register*.

Other "Blue Ribbon" Products in *Chemical Engineering Catalog, Refinery Catalog, Best's Safety Directory* and *Mining Catalogs*.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

For more details circle NED-6759 on enclosed inquiry slip

New Processes & Materials

SPOT WELDING ELECTRODE offered in No. 3 Morse taper sizes

Now available in No. 3 Morse taper sizes, as well as Nos. 1 and 2, Kaptrode resistance welding electrode has an expendable cap which fits into a semipermanent adapter shank. This fits any standard electrode holder of the correct taper size. Six nose styles are made: pointed, dome, flat, offset, truncated cone and radius face. Class 1, 2 and 3 RWMA alloys are offered. Shanks are made in six lengths from 1¾ to 3 in. All electrodes project 1 in. from the shank. Made by **Weiger Weed & Co.,** 11648 Cloverdale Ave., Detroit 4, Mich.

For more details circle NED-6760 on enclosed inquiry slip

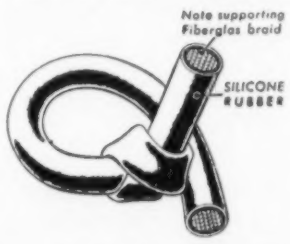
SYNTHETIC RUBBER STABILIZER prevents staining or discoloration

Usable in synthetic rubber for white sidewall tires, pressure-sensitive adhesives, tiling, hospital sheeting, sponge rubber, wire insulation and other products where light colors are desired, Polygard chemical stabilizer makes possible the production of nonstraining and nondiscoloring GR-S synthetic rubber. This alkylated aryl phosphite chemical also imparts heat stability and guards rubber from destructive effects of heat and oxygen during storage and processing. Chemical is incorporated with rubber as an emulsion during either hot or cold production processes. Made by **United States Rubber Co.,** Naugatuck Chemical Div., Naugatuck, Conn.

For more details circle NED-6761 on enclosed inquiry slip

SILICONE-FIBERGLAS TUBING is flexible electrical insulation

Rated as class H electrical insulation, BH 1151 tubing is made of braided Fiberglas coated with silicone rubber. It maintains its flexibility and rated dielectric strength of 1500 to 7000 v through a temperature range of −90 to 400° F, with spot temperature resistance to 600° F. Available in all standard sizes in NEMA grades H-A-1, H-B-1, H-C-1 and H-C-2, it is made in natural off-white and colors to aid in circuit tracing and coding, and in 36-in. lengths, coils or short lengths cut to specification. Made by **Bentley, Harris Mfg. Co.,** 913 Hector St., Conshohocken, Pa.



For more details circle NED-6762 on enclosed inquiry slip

LICK YOUR CONTROL PROBLEMS
WITH THE SNAP ACTION Bell Switch

- Temperatures to 400°
- Fine silver contacts
- Ceramic & Fiberglas insulation
- Alnico V Permanent Magnet
- 10 amps. at 110 volts; 5 amps. at 220 volts, A. C.
- Direct loads up to ¼ h.p., A. C. ratings

MORE and more designers are finding the Bell Switch just what they need to solve their control problems. The Bell Switch is a 100% positive snap action, magnetic proximity switch that is adaptable to any application where switch must be actuated through sealed barriers. Among the many applications in which it has been so successfully employed are cutoffs for all kinds of systems, counting devices, signal alarms and operation of automatic machinery. In addition to standard models, the Bell Switch is available in immersion-proof and splash-proof models to meet the demands of even the most severe services.

Write for Detailed Information Concerning Sizes, Specifications and Application.

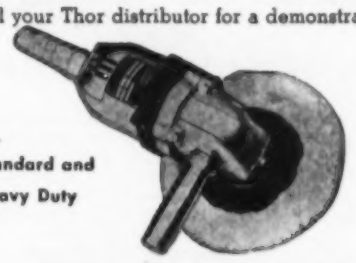
JO-BELL PRODUCTS, INCORPORATED
4840 So. St. Louis Ave. • Chicago 32, Illinois
Liquid Level Controls • Carbonators • Magnetic Switches • Special Controls

For more details circle NED-6763 on enclosed inquiry slip

GET THE Thor STORY
ON PORTABLE ELECTRIC

POLISHERS
Write for Catalog E-2

For power that *delivers* when heaviest pressure is applied—always specify Thor Silver Line Electric Polishers . . . 50 percent more powerful than any tools in their class. Call your Thor distributor for a demonstration.



Standard and Heavy Duty

Belt Sanders
Bench Grinders
Drills
Grinders
Hammers
Impact Wrenches

Thor PORTABLE POWER TOOLS

Nibblers
Nut Setters
Polishers
Sanders
Saws
Screwdrivers

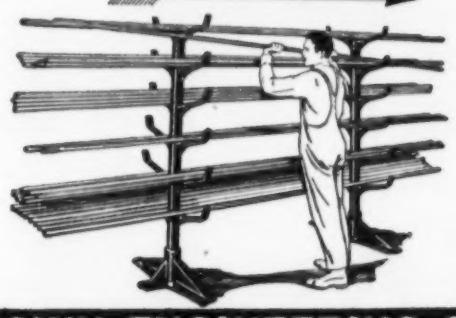
INDEPENDENT PNEUMATIC TOOL CO., AURORA, ILL.

For more details circle NED-6764 on enclosed inquiry slip

SPEEDS UP STOCK-ROOM SERVICE

The BROWN TIME-SAVING RACK saves the time previously lost end-hauling each bar or stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time, and returned to their production machines to turn out a maximum of output. Any time you require additional storage space, all you need do is to add more units. If you want to relocate it at any time, you can do so for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn, warp, sag or twist; depreciation is practically nil. SEND FOR BULLETIN No. 26-D DESCRIBING—

BROWN'S *QUICK-SERVE* RACKS



BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

For more details circle NED-6765 on enclosed inquiry slip

Globe Loading Lift
Speeds Loading and Unloading

Trucks, trailers, railway cars, and cargo planes can be loaded faster and at lower cost with a Globe Loading Lift. What's more, material can be handled with less risk of damage to cargo or injury to workers.

The Globe Loading Lift is a simple elevating platform that eliminates the need for ramps, gangplanks, and "muscling" of cargoes. Platform recesses into floor or driveway in "down" position. Accurate control makes for easy flush-leveling to keep goods moving on an even plane.

GIVE *YOUR* BUSINESS A LIFT!

A Globe OiLIFT will help you make the most of your manpower . . . speed production, save you money, help eliminate damage to materials and injury to workers. Write *today* for valuable information on Self-Leveling Ramps, Machine Loading Lifts, Industrial Truck Service Lifts, Production Lifts, etc. Ask for Bulletin NE-416.

GLOBE HOIST COMPANY • 1000 E. Mermaid Lane, Phila. 18, Pa.
Factories at Des Moines, Iowa, and Philadelphia, Pa.

For more details circle NED-6766 on enclosed inquiry slip

3-LB. ROTOR SCALER CLEANS WELDS FASTER

"PAID OFF" IN 25 DAYS

A FABRICATING shop reports the new Rotor S-1 Scaler cleans more welds per day because it is lighter, shorter, easier to get into hard-to-reach places. Savings paid off cost in 25 days. Weighs only 3 pounds; is 10 inches long. Safety retainer chisel allows long reach into corners—you don't have to hold chisel. For peening, rust and scale removal, star drilling, light chipping. Ask for Bul. 33.

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-6767 on enclosed inquiry slip

ONCE IT TOOK 2 MEN

NOW IT ONLY TAKES 1

with the

RAYMOND

Hydraulic PALLET LIFT TRUCK

One man handles 3-ton loads with ease using this RAYMOND Hydraulic Pallet Lift Truck! Why — because hydraulic power, not the operator, does the lifting. A few pumps on the foot pedal and even heaviest loads are ready for hauling.

RAYMOND Pallet Trucks help out on short hauls and during peak periods—release your power trucks for long hauls and tiering.

MODEL L4P

These rugged trucks are highly maneuverable, feature fingertip lowering, come in 4,000 or 6,000 lb. capacities. Available also in Lightweight 2,000-lb. capacity model.

FAST MOVER!

That's this RAYMOND Low-Lift Rider-Type Electric Truck. It travels up to 6 mph empty and 5 mph loaded — speeds up long hauls, stock picking, loading, unloading. Capacity: 4,000 lbs.

MODEL EL4F

SEND TODAY

The RAYMOND CORPORATION
Formerly LYON-Raymond Corporation
4178 Madison St., Greene, N.Y.

Gentlemen: Please send me Bulletin 207, describing your complete line of Hydraulic Lift Trucks. Also Bulletin 750, showing your new Low-Lift Electric Truck.

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-6768 on enclosed inquiry slip

New Literature and Catalogs

Drive Overload Cut-Out

John Waldron Corp.—Anchor-Waldron overload cut-outs which instantly shut-off motor when an overload occurs are detailed in 12-page illustrated catalog 51. Available in both flexible coupling and in pulley types, device resets itself automatically when overload is cleared. Torque range of coupling is 20 to 2000 lb-in. and of pulley type is 20 to 10,000 lb-in.

For more details circle NED-6769 on enclosed inquiry slip

Gate, Check & Globe Valves

Fairbanks Co.—Conforming to specifications of American Water Works Association, line of iron valves is detailed in 4-page illustrated circular V-405. Specifications are given on U-bolt, bronze mounted, all iron and quick-opening gate valves; bronze mounted, stop and check, and Hitensil globe valves; and on swing check and fire line valves.

For more details circle NED-6770 on enclosed inquiry slip

Paint Stripper

Klem Chemicals Inc.—How Strip Aid removes paint, enamel, lacquer and other finishes from conveyor hooks, rejected parts and production finishing equipment is shown in 4-page illustrated bulletin.

For more details circle NED-6771 on enclosed inquiry slip

Mercury Lamp Transformers

Jefferson Electric Co.—Both indoor and outdoor transformers for operation of H-1 400-w mercury lamps are described in 16-page illustrated bulletin 521-5. Actual installations are shown, and diagrams give connections, dimensions, mounting methods, and starting and technical data.

For more details circle NED-6772 on enclosed inquiry slip

Negative Temperature Coefficient Resistors

General Electric Co., Carboloy Dept.—Thermistors, the subject of 30-page illustrated catalog TH-5, are electronic semiconductor control elements whose electrical resistance responds negatively to minute temperature changes. Applications and wiring diagrams are included. Temperature-resistance ratio characteristics for rod, disk and washer types are graphed.

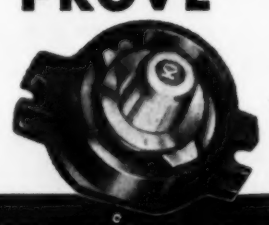
For more details circle NED-6773 on enclosed inquiry slip

Industrial Steam Traps

W. H. Nicholson & Co.—12-page illustrated bulletin 152 features line of industrial steam traps equipped with bellows of bronze, Monel or stainless and bodies in bronze semisteel and cast steel. Sizes range from ¼ to 2 in. for pressures from vacuum to 300 psi. Included are piping diagrams and selection data.

For more details circle NED-6774 on enclosed inquiry slip

SERVICE MANAGERS PROVE



KLIXON PROTECTORS
Reduce Motor Burnouts and Service Problems

Reports from service managers, electric motor repairmen, heating and air conditioning dealers throughout the country prove that Klixon protectors help to prevent motor burnouts in electrical appliances of all types. In addition, their records show that Klixon protectors reduce motor service calls to a bare minimum.

You, too, can provide your dealers and their customers with motor burnout protection by specifying that your motor manufacturer supplies you with motors that have Klixon protectors built in. The additional cost is exceptionally low, while the benefits are high.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1907 Forest St., Attleboro, Mass.

KLIXON

For more details circle NED-6775 on enclosed inquiry slip

Quality Wire INSURES **QUALITY SPRINGS**

Whatever your spring wire requirements—consult with Seneca! Our production *geared to precision* in manufacturing oil tempered and hard drawn wire—round and flat—for all types of high grade mechanical springs. Seneca uniformity and dependability help the spring manufacturer produce high quality springs at low cost. Write . . . Seneca Wire & Mfg. Company, Fostoria, Ohio. Representatives in principal cities.

SENECA ROUND AND FLAT SPRING WIRE
WIRE & MFG. COMPANY · FOSTORIA, OHIO

For more details circle NED-6776 on enclosed inquiry slip

Conveyor Belting tailored to the job

For super-tension jobs involving heavier loads, longer centers, higher lifts—or for handling lighter materials on easier jobs—depend on NYB&P conveyor belts.

NYB&P, backed by more than a century of experience, has the skill and the facilities to produce belts of the most advanced design.

Call on your local NYB&P Distributor for your copy of the NYB&P Conveyor Belt Manual or write directly to address below.

Since 1846

NEW YORK BELTING & PACKING CO.
1 MARKET STREET, PASSAIC, NEW JERSEY

For more details circle NED-6777 on enclosed inquiry slip

to make a model . . .

. . or move a mountain

. . . let *Lamson* fill your Fastener needs

As one of the few "full line" fastener manufacturers, Lamson can greatly simplify your fastener procurement. For they can supply practically any type or size of bolt, nut or screw plus many special fastening devices such as wire rope clips, cotters and threaded studs.

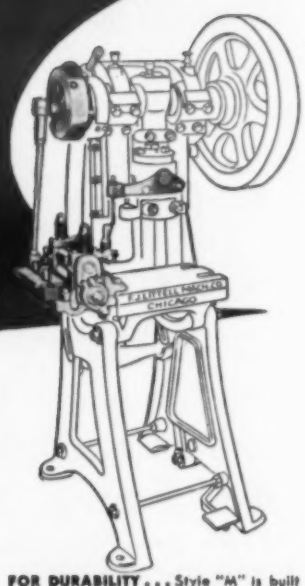
So if you are now using one or more Lamson fasteners, consider the advantage to you of making Lamson & Sessions headquarters for *all* your fastener needs. It will simplify ordering, speed delivery and save you money in terms of clerical and billing time.

Lamson & Sessions

The LAMSON & SESSIONS Co.
1971 West 85th St. · Cleveland 2, Ohio
Plants at Cleveland and East Ohio · Birmingham · Chicago

For more details circle NED-6778 on enclosed inquiry slip

FOR LOW COST AND BIG RESULTS
Feed Your Presses With
LITTELL
STYLE "M" AUTOMATIC
ROLL FEED



FOR SPEED . . . With Style "M" automatic feeding your press can easily produce 9,000 stampings an hour at 200 strokes per minute, or 4,600 stampings an hour at 100 strokes per minute.

FOR VERSATILITY . . . Style "M" feeds left to right, right to left and front to back. Feed direction can be reversed by simply reversing clutch. Feed lengths per stroke are 0 to 4⅜" with standard gears and 0 to 8½" with compound gears.

FOR ADAPTABILITY . . . Style "M" is adaptable to any standard punch press. It feeds coil stock up to 8" wide and up to .055" thick (17 gauge).

FOR SAFETY . . . Style "M" automatic feeding keeps hands and fingers away from danger, prevents costly accidents.

FOR DURABILITY . . . Style "M" is built with hardened and ground feeding rolls and the other quality features that have made Littell Roll Feeds accurate and durable since 1918.

FOR ECONOMY . . . Style "M" brings you a big saving in price. It gives your presses the lowest insurance rate. It cuts your cost per stamping by multiplying press output.

WRITE FOR CATALOG

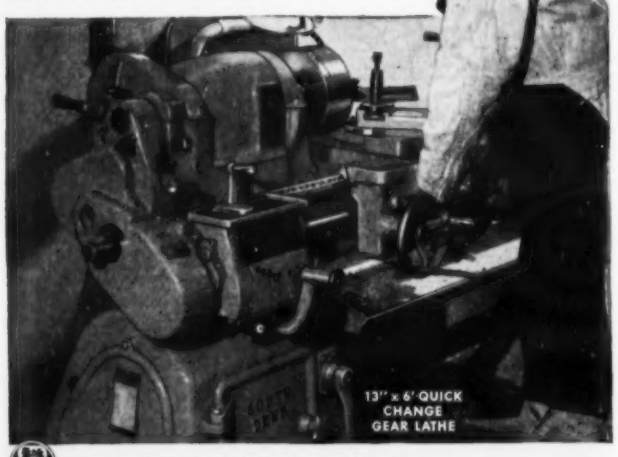
District Offices: Detroit, Cleveland

F. J. LITTELL MACHINE CO.
ROLL FEEDS • DIAL FEEDS • STRAIGHTENING MACHINES • REELS • AIR BLAST VALVES
4169 N. RAVENSWOOD AVE. • CHICAGO 13, ILL.

▲ For more details circle NED-6779 on enclosed inquiry slip ▲

South Bend 13" Lathes are popular wherever there are a variety of precision parts to be machined. These quality-built lathes are fast and simple to operate. Set-ups and job change-overs are quickly and easily made. Maximum production at highest accuracy and lowest cost will reduce expenses in your shop. Write for complete information on South Bend Precision Lathes, Drill Presses, Shapers and other machine tools.

SOUTH BEND 13" LATHE for Accurate, Low-Cost Machining



SOUTH BEND LATHE Building Better Tools
South Bend 22, Indiana Since 1906

▲ For more details circle NED-6780 on enclosed inquiry slip ▲

Paisley ADHESIVES
ALL RESIN ADHESIVE USERS . . .

GET THIS VALUABLE INFORMATION NOW!

All users of Resin Adhesives *need* this new Paisley Resin Adhesive Bulletin No.23. It will give you practical, *usable* information never before available to Resin Adhesive users! Valuable technical aspects are explained in language any layman can understand. No cost or obligation is involved. *Use your letterhead please.* Just ask for Bulletin No. 23. Or, if you have a Gluing or Adhesive problem, ask for an Adhesive Operation Data Sheet. (You fill in and return for Laboratory recommendation.)

PAISLEY PRODUCTS INCORPORATED
DIVISION OF MORNINGSTAR, NICOL, INC.
1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st ST., NEW YORK 19, N.Y.
Manufacturers of Glues • Pastes • Resin Adhesives • Cements and Related Chemical Products

▲ For more details circle NED-6781 on enclosed inquiry slip ▲

New Literature & Catalogs

Desulfurizing Ladle Lining

Ironton Fire Brick Co.—Advantages of monolithic refractory linings for desulfurizing ladles is brought out in 8-page illustrated bulletin 102. It describes Ironton Nojoint plastic lining which is nonporous, dense and resistant to cutting action. Application methods and other uses are covered.

▲ For more details circle NED-6782 on enclosed inquiry slip ▲

Automatic Temperature Controls

Burling Instrument Co.—How this line of electric and pneumatic automatic temperature controls functions is included in 12-page illustrated catalog G-17. General information on each model and specifications are given.

▲ For more details circle NED-6783 on enclosed inquiry slip ▲

Air Blasting Machines

American Wheelabrator & Equipment Corp.—Line of airblast cabinets in various sizes suited for cleaning small lots of work that can be manipulated by hand is subject of catalog 31-A. Suction and pressure type models are offered.

▲ For more details circle NED-6784 on enclosed inquiry slip ▲

Flexible Ducting

American Ventilating Hose Co.—Various uses of Flexaust spiral wire reinforced hose and accessories are described and illustrated in 4-page bulletin No. 34. Ducting is nonkinking, air tight, easy to install and usable for pressure or suction.

▲ For more details circle NED-6785 on enclosed inquiry slip ▲

O-Rings & O-Rings

Plastic & Rubber Products Co.—Extensive information on Parco O-rings is contained in 48-page spiral-bound engineering handbook. Data on material selection, how to order and general O-ring gland design information are included. Eight tables cover dimensions and anti-extrusion devices and present detailed specifications.

▲ For more details circle NED-6786 on enclosed inquiry slip ▲

Hydraulic Gear Pumps

Hydraulic Equipment Co.—Illustrations, dimensions and performance data on various types of flange and foot-mounted Hydreco 2000 series reversible rotation oil hydraulic gear pumps are included in bulletins 128 and 129. Capacities range from 13 to 25 gpm at 1200 rpm, 1500 psi.

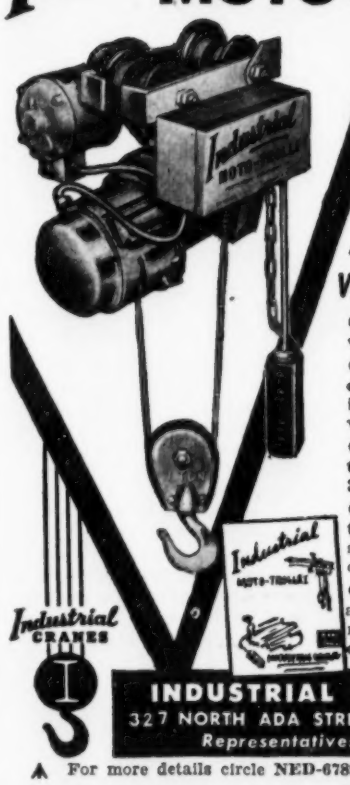
▲ For more details circle NED-6787 on enclosed inquiry slip ▲

Electrical Ground Fittings

Thomas & Betts Co.—"Selector Chart" simplifies the specifying of electrical ground fittings by graphically showing how 30 common combinations of different ground wire and water pipe sizes can be made from ten stock parts. Fittings are UL approved.

▲ For more details circle NED-6788 on enclosed inquiry slip ▲

Industrial MOTO-TROLLEY



MAY BE ATTACHED TO YOUR STANDARD ELECTRIC HOIST . . .
ADJUSTABLE TO ACCOMMODATE WIDE VARIETY OF BEAM SIZES

- Crown-tread machine steel wheels with hardened drivers.
- Each wheel equipped with double-row precision ball bearings and removable-head axle with Alemite grease fittings.
- Powered by a crane-duty high-torque totally enclosed motor of 30 minute 55 degree rating.
- Magnetic contact panel has transformer to reduce voltage in single speed push button control circuit.
- 4-button control station operates single speed trolley and hoist motions.

Write for Literature

Industrial CRANES

INDUSTRIAL EQUIPMENT CO.
327 NORTH ADA STREET CHICAGO 7, ILLINOIS
Representatives in Principal Cities.

▲ For more details circle NED-6789 on enclosed inquiry slip ▲

Make your Eye Safety Program a real success!

Supply WATCHEMOKET eye SAVERS

Insure the success of your eye safety program by supplying goggles that workers will actually wear! The light, comfortable fit and good looks of Eye-saver plastic goggles make them popular with workers everywhere. Available from your safety supplier in many different styles to meet all eye hazards. Tuc-Away model (illustrated) features "telescoping" temples with frame fashioned for "change-around" lens plan.

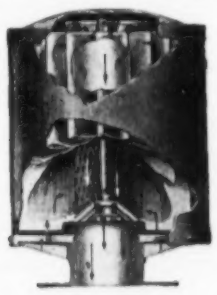
FREE! *Send for magazine article giving impartial advice on best uses of plastic eye protection. Eye-Savers catalog also included.*

WATCHEMOKET OPTICAL CO., INC.
DEPT. 7, PROVIDENCE • RHODE ISLAND
Producers and Originators of Practical Plastic Eye Protection

▲ For more details circle NED-6790 on enclosed inquiry slip ▲

"LET'S SPECIFY STAYNEW INTAKE FILTERS

They Give Us Positive Protection . . . They won't need Regularly Scheduled Maintenance . . . They're Easy to Clean on the Job . . . Efficient over a Wide Range of Loads
They're not Affected by Temperature Change
There's no Oil Carry-Over
OUR EQUIPMENT WILL LAST LONGER!"



MODEL D Intake Filter

Staynew Intake Filter's *Positive Protection* stops carbon accumulation and needless wear by keeping dust and dirt *out* of air intakes. And Staynew Filters frequently operate two or more years *without maintenance.* Specify Staynew and lengthen equipment life—increase productive time.

Write for Complete Booklet on Staynew Intake Filters.

Representatives in Principal Cities

DOLLINGER PROTECTION STAYNEW FILTERS
DOLLINGER CORPORATION
49 Centre Pk., Rochester 3, N. Y.
ALL TYPES OF FILTERS FOR EVERY INDUSTRIAL NEED

▲ For more details circle NED-6791 on enclosed inquiry slip ▲

Eliminate Overheating Save Fuel

Hung from ceiling or mounted on floor

REZNOR GAS UNIT HEATER
World's largest seller

You can heat a large area with Reznor heaters. You can heat part of a building and not all of it with Reznor heaters. Or, if you need just enough heat to take the edge off, in spring or fall, Reznor Suspended Gas Unit Heaters will do that. Don't waste fuel by heating the full area of big rooms when you want to heat part . . . don't waste fuel by long-time firing when a few minutes heat in the "right" place with Reznor Gas Heating Machines will do the job better than other methods. There's a Reznor dealer near you. Write us for his name.

REZNOR MANUFACTURING CO.
14 UNION ST. • MERCER, PENNA.
Send me 20-page catalog in full color

Name_____
Firm_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-6792 on enclosed inquiry slip ▲

SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire—no shock.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

For more details circle NED-6793 on enclosed inquiry slip

ONE MAN Lifts 800 POUNDS

It takes but little effort for trucker to pick up and move containers weighing up to 800 pounds, and you save the labor of helpers when your shop or warehouse is equipped with—

SABIN BARREL TRUCK

You simply run truck up to container, hook on at top and pull back on handle to pick up load.' Third Wheel Feature provides better balance and added safety in moving loads. *Order one of these trucks today and you'll soon want more.*

WRITE FOR BULLETIN NO. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Avenue
Cleveland 3, Ohio

For more details circle NED-6794 on enclosed inquiry slip

GOOD NEWS ABOUT WHEELS

NEWS! About how 44 centers and only 22 bearings give a choice of 144 sizes to 12" x 4".

NEWS! About American Steelite® light-weight champs—weighing up to 9 pounds less than ordinary wheels.

NEWS! About American Tread-Lock method—the tread is *Rolled On So It Won't Roll Off!*

NOW! Get all this NEWS in the NEW bulletin on American Industrial Wheels, from:

THE AMERICAN PULLEY COMPANY, Phila., Pa.

THE AMERICAN PULLEY COMPANY
4294 WISSAHICKON AVE., PHILA. 29, PA.
Gentlemen:
I want the NEWS about Wheels—rush me your new American Steelite® Wheel Bulletin.
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Firm Name_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-6795 on enclosed inquiry slip

New Literature & Catalogs

Antislip Floor Waxes

E. I. du Pont de Nemours & Co., Grasselli Chemicals Dept.—Action of Ludex colloidal silica in imparting greater safety to floor waxes is subject of 12-page illustrated brochure "Antislip Floor Waxes." Electron microscope photos show how it works to give skid resistance and greater hardness to wax formulations.

For more details circle NED-6796 on enclosed inquiry slip

Small Valves

Republic Mfg. Co.—40-page illustrated catalog covers needle, globe, ball check, relief and plug valves formerly made by Parker Appliance Co. Designed for aircraft and industrial use, valves have size range of 1/8 to 1 in. and are made in brass, aluminum alloy, steel and stainless steel for either pipe or tube connection.

For more details circle NED-6797 on enclosed inquiry slip

Coolant Cleaner

Barnes Drill Co.—Just how the Barnesdril automatic magnetic coolant separator cleans coolant used for metal finishing operations is related in 12-page illustrated bulletin. Both metallic sludge and abrasives are removed automatically, and clean coolant is returned to sump ready for reuse.

For more details circle NED-6798 on enclosed inquiry slip

Resistance Welding Electrodes

Weiger Weed & Co.—Nearly 700 different styles and sizes of resistance welding electrodes, including the new copper-conserving Kaptrodes, are listed in 32-page illustrated catalog 14.650-3. Numerous additions have been made to the line of cold-formed offset electrodes, irregular and gun welder tips.

For more details circle NED-6799 on enclosed inquiry slip

Electrical Apparatus Maintenance

Westinghouse Electric Corp.—24-page illustrated booklet B-4766 describes complete maintenance service for electrical apparatus, based upon use of genuine renewal parts, repair service plants, and engineering and field service. Illustrated are special skills, testing devices and repair equipment that are available to customers at strategically located repair plants.

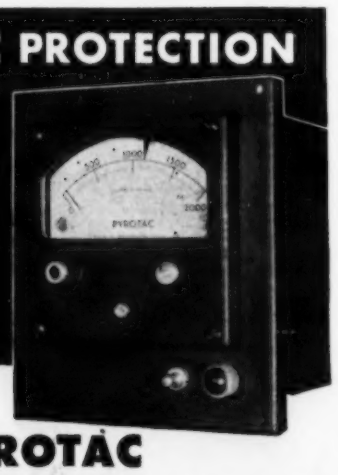
For more details circle NED-6800 on enclosed inquiry slip

Foundry Mechanization

Link-Belt Co.—How a foundry can be mechanized for increased production, better castings and improved working conditions is topic of 36-page illustrated book 2439. Presented is selection of case histories, foundry layout drawings and installation photographs. Typical study shows how mechanized sand and casting handling equipment boosted melt from 60,000 to 100,000 lb per shift and reduced manual lifting from 1470 to 294 tons per day.

For more details circle NED-6801 on enclosed inquiry slip

AUTOMATIC PROTECTION OR CONTROL for your heating process



...WITH ALNOR PYROTAC

Here's a simple, low-cost way to obtain *AUTOMATIC PROTECTION* against damage due to excessive temperatures . . . safeguard your investment in heating equipment and materials in process. This precision-built instrument constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the heated circuit at a safe, pre-set temperature. It may also be used as a *CONTROLLER* on a process requiring shutdown upon reaching a final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures safety if couple or extension wires should break.

Ask your Alnor representative for details on this sturdy, precise instrument. You'll find the price of less than a hundred dollars unusual for an instrument of this type. Write for bulletin that contains complete description and wiring diagrams of actual applications. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-6802 on enclosed inquiry slip

Some like them green...
Some like them clear...

Safety Goggles

Either Style gives Wide Vision and Comfort

AO Panoram Goggles

Workers obtain a "picture window" view of the work with AO's Panoram Goggles. Both the "600" model for large and medium size faces and the "800" for smaller faces are available in any combination of green or clear lenses or frames. Rubber cushions are available for utmost comfort when goggle must be worn for long periods of chipping, grinding, babbitting, riveting, spot welding and similar work. Your nearest AO Safety Products Representative can supply you.

Register and Vote!

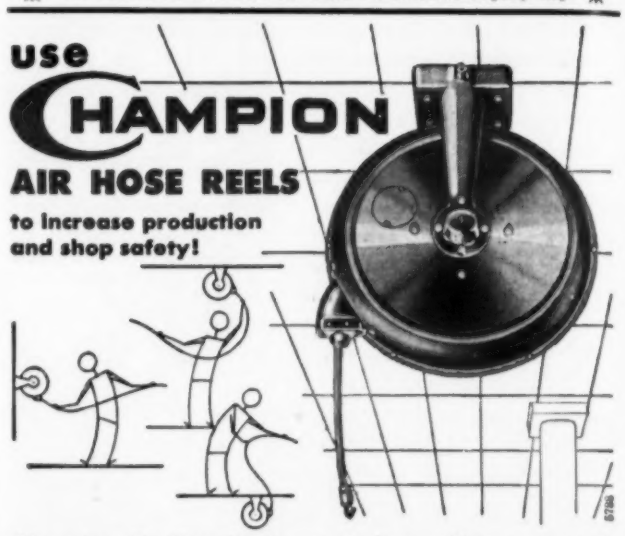
American Optical COMPANY SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

For more details circle NED-6803 on enclosed inquiry slip

USE CHAMPION AIR HOSE REELS

to increase production and shop safety!



Champion Air Hose Reels put air lines within arms reach of the worker, yet keep hose off the floor to prevent accidents. They can be mounted conveniently on ceilings, walls or floors. They are totally enclosed — free from dust and grime. Inside sheaves prevent kinking — over 30 feet of special spring steel rewind hose at a governed speed. There are 4 stops to a complete circle so that just the needed amount of hose is exposed — hose is extra tough 2 braid for long hard usage. All connections are air-tight, non-leaking. Write TODAY for complete data and a FREE copy of the Champion Manual that contains valuable data on handling compressed air.

CHAMPION PNEUMATIC MACHINERY CO.
837 N. Pleasant Street Princeton, Illinois

AIR HOSE REELS • AIR COMPRESSORS • AIR ACCESSORIES

For more details circle NED-6804 on enclosed inquiry slip

"...On the feet of Individuals."

Society advances on the feet of individuals. We Americans live under the highest standard ever achieved because we believe in and are permitted currently to practice three cardinal principles of progress—Invention, Research and COMPETITION.

Nineteen basic inventions influence our pattern of life today. Each one was created to satisfy a fundamental need. For example, the electric light industry has grown to an annual volume of $501,500,000 in light bulbs alone; the value of aviation manufactures in 1951 in the United States alone was estimated at $3,350,000,000 and in February, 1952, records show a $10½ billion backlog of orders. In every case, employment and sales volume grew enormously and the public enjoyed huge personal benefits

Side by side with Invention came Research, exemplified by the competition of intelligent men questing for new materials, methods, processes, scientific truths. Current advertisements tell of medicines that cure "incurable" diseases, food processes that cook, sterilize and pack hundreds of cans a minute. And in every case, the public enjoys huge personal benefits.

Inventions, marketing and research require substantial investments. A grave danger to their future now looms. In 1951, corporation net profits suffered a loss of 21% over the previous year. The reason—taxes too high, government controls and policies that interfere too greatly with private industry. If this continues, financial resources will dwindle, competition will be stifled.

We need competition to assure progress for people.

This report on PROGRESS-FOR-PEOPLE is published by this magazine in cooperation with National Business Publications, Inc., as a public service.

THE COMPETITIVE SYSTEM DELIVERS THE MOST TO THE GREATEST NUMBER OF PEOPLE

For more details circle NED-6805 on enclosed inquiry slip

New POWER-TORQUE Tools *automatically* give precise control to within 2% of Torque limits! Eliminate need for hand torquing inspections. Drastically cut scrap! Models with capacities from 0-25 to 0-2500 inch lbs. Air, electric or high cycle motive power. For specifications write Dept. C-7.

POWER-TORQUE TOOLS Registered U.S. Patent Office

Manufactured by
GARVIN BROTHERS, INC.
P. O. BOX 536, SOUTH BEND 24, IND.

For more details circle NED-6806 on enclosed inquiry slip

SPACE-SAVING LIGHTWEIGHT THERMOSTATS

The three skeleton thermostats described are particularly suited to control precisely liquid, gas and air temperatures on difficult applications where space is limited and light weight essential. They are available with ranges of 100° or 200° F., between limits of 0° and 425° F.

Type C41 may be used for either air or liquid temperature control. It is available for some applications, where extreme sensitivity is required, with a slotted bellows housing. It can be supplied with lock-out manual reset and with calibration.

Type C47 is especially adapted for liquid temperature control. It may be fitted with lock-out manual reset switches.

Type C48 is specifically designed for air temperature control. It may be supplied with slotted bellows housings for increased sensitivity and with lock-out manual reset switches.

Complete specifications for the Type C41, Type C47 and Type C48 are contained in Bulletin #2-2. Write for your free copy today.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

For more details circle NED-6807 on enclosed inquiry slip

METAL DISINTEGRATION!
by THOMAS METALMASTER

TOOL STEEL CUTTING
TOOL & DIE REPAIRS
TAP REMOVAL
DRILL PULLING

WRITE TODAY!
There's a technical engineer in your area that'll give an on the spot demonstration in your plant at your convenience.

WARNER DIVISION:
CLINTON MACHINE COMPANY
21535 GROESBECK HWY.
DETROIT 5, MICHIGAN

For further technical information relative to the famous Thomas Metalmaster Disintegrators write to the main office listed above and prompt service will be given your inquiry.

For more details circle NED-6808 on enclosed inquiry slip

New Literature & Catalogs

Protective Surface Coating

Preferred Utilities Mfg. Corp.—White Hot and Pyro-Chrome coatings that prolong the life of ceramics, metal, refractories and glass are described in 16-page illustrated bulletin "New Approaches to Surface Protection." Coatings also reflect heat and aid in the combustion processes.

For more details circle NED-6809 on enclosed inquiry slip

Directional & Vaporproof Lighting Units

McPhilben Mfg. Co.—Specifications and other data on line of surface-mounted, edge-lighted, back-lighted, globe, bulls eye and recessed-mounted exit and directional signs as well as on vaportight lighting fixtures for exterior and interior use are given in 4-page illustrated bulletin "Custom Made."

For more details circle NED-6810 on enclosed inquiry slip

Plastic Reinforcing Resins

Bakelite Co.—Characteristics of many different polyester resins which produce strong, lightweight reinforced plastics with widely varying properties are described in 32-page illustrated technical data book "Polyester Resins for Reinforced Plastics."

For more details circle NED-6811 on enclosed inquiry slip

Drive Overload Release

Dodge Mfg. Corp.—How the new Tri-Matic overload release protects Torque-Arm speed reducers from overload damage is explained pictorially in 4-page illustrated bulletin A-616. Device loosens the belts, cuts off power and gives warning.

For more details circle NED-6812 on enclosed inquiry slip

Floor Hardener & Dustproofer

L. Sonneborn Sons, Inc.—Explanation of how Lapidolith chemical concrete hardner makes floors wear longer and prevents dusting is included in 6-page illustrated folder. Included is 4-page technical data guide No. 1.

For more details circle NED-6813 on enclosed inquiry slip

Adjustable Flow Valves

Hauck Mfg. Co.—Adjustable flow valves for air and gas is subject of 8-page illustrated catalog No. 713. These units will produce flow rate of any desired characteristics and can be automatic in operation. Single and dual valves are available.

For more details circle NED-6814 on enclosed inquiry slip

Building Materials

Philip Carey Mfg. Co.—More than 800 building materials and industrial products obtained from asbestos, asphalt or magnesia are described in illustrated "Reference List." This manual shows Army, Navy, MIL, Federal, ASTM and other specifications, plus the corresponding products. Data are given on roofings, insulation, asbestos boards, paving materials, ducts, paints, siding and cabinets.

For more details circle NED-6815 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

SAFE STORAGE FOR EXCELSIOR AND OTHER INFLAMMABLE MATERIALS

Meet all fire regulations of Insurance Companies, State and Municipal authorities.

IPCO SAFETY STORAGE BINS

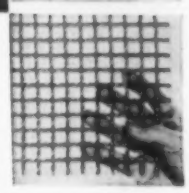
For shipping and receiving rooms and other plant areas where excelsior, paper, rags, paint and other combustibles are used. Sturdily manufactured of heavy gauge galvanized iron with reinforced angle corners. Fitted with fusible link so cover is allowed to close automatically in case of fire.

WRITE FOR BULLETIN NO. 63

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-6816 on enclosed inquiry slip

You can count on CAMBRIDGE for all types of INDUSTRIAL WIRE CLOTH



Fine or Coarse Mesh—More than 600 different mesh sizes are available from 20 x 250 mesh up to 4" openings. Many popular items are kept in stock and can be shipped to you immediately.

Any Metal or Alloy—Any metal or alloy that can be drawn into wire can be woven by our skilled craftsmen, including precious metals and unusual materials such as lead wire.

Varied Weaves—Cambridge industrial wire cloth is regularly produced in nine basic weaves. Single intermediate crimp through twilled dutch filter cloth, each of which has certain advantages for specific uses.

Accuracy—You know the mesh count is right when you specify Cambridge. Every inch of cloth produced in our plant is carefully controlled by individual loom operators during weaving; each finished piece is again inspected before shipping.

And, for Expert Advice—on any problem of filtration, screening, sizing or other wire cloth uses, you can count on your Cambridge field engineer to provide the answer. Call on him freely. For information, write direct or look under "Wire Cloth" in your classified telephone directory.

FREE wire cloth reference manual. Gives complete range of sizes and weaves available from Cambridge, specifications, metallurgical data and fabrication facilities. WRITE TODAY.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department C
Cambridge 7, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-6817 on enclosed inquiry slip

Unsurpassed for... Quality

with design and workmanship
choice of materials
underwriters' acceptance
dependable service

*McGill portable lamp guards are designed to insure the utmost in safety and utility value to the user. Each different model is engineered for a particular type of service such as the new completely grounded unit, No Rol cage, an approved convenience outlet and a cage with concentrating end lens to beam light. The thoroughness and care with which McGill guards are manufactured help make them industry's preferred portable lamp guards.

Available from your electrical wholesaler

No. 5025 SLRG is completely grounded. Has molded phenolic handle and approved convenience outlet with 2 parallel and U shaped third blade to accommodate power tools. End lens in cage beams light to inaccessible places. Equipped with 25 foot of flame, grease and abrasion proof 16-3SJT cord and plug. Write for Catalog No. 49.

Underwriters' Laboratories Inc., Inspected

ONLY McGILL MAKES Leader SWITCHES
McGILL electrical specialties

Mc Gill Manufacturing Co., 151 N. Campbell St., Valparaiso, Ind.

For more details circle NED-6818 on enclosed inquiry slip

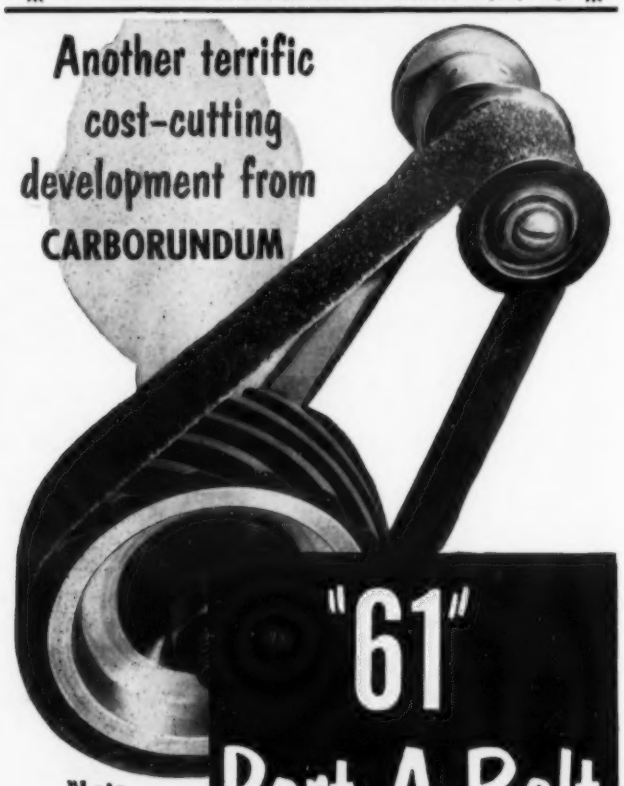
THE
'BIG 3'

Ask your Burndy Distributor

BURNDY
NORWALK · CONNECTICUT

For more details circle NED-6819 on enclosed inquiry slip

Another terrific cost-cutting development from CARBORUNDUM



"61"
Port-A-Belt
GRINDING ATTACHMENT

"Lets you bring the abrasive belt to the work"

OUTSTANDING FEATURES

- No bounce—no chatter—easy to handle.
- Uses revolutionary "61" wheel principle—belts grind faster, last twice as long.
- Fits practically all standard-make horizontal portable grinders—electric or air.
- Ideal in close quarters—replaces two or three conventional finishing operations.
- Worn belts snap off—new belts snap on—in a jiffy.
- Two handy, compact models—No. 400-200 (illustrated) takes 20" x 2" belt...No. 200-100 takes 12" x 1" belt.

OUTSTANDING USES

- Roughing, finishing and polishing dies and molds.
- Reducing welds—one operation now replaces triple use of cup wheel, sander disc and set-up wheel.
- Breaking edges—saves 60% of the time you now spend with cones, hand files or sander discs.
- Surface finishing of contours—concave, convex or irregular—free from lap or gouge marks.

Get the details

THE CARBORUNDUM COMPANY, Dept. NED 82-73
Niagara Falls, New York
Tell me more about your new PORT-A-BELT Grinding Attachment.

Name
Company
Street and Number
City Zone State

Look to
CARBORUNDUM
TRADE MARK
for the NEW developments in ALL abrasive methods

"Carborundum" and "Port-A-Belt" are trademarks of The Carborundum Company, Niagara Falls, N.Y.

82-73

For more details circle NED-6820 on enclosed inquiry slip

New Literature & Catalogs

Elevator Operation

Charles W. Lerch & Associates—Written for owners and superintendents of buildings that contain passenger and freight elevators, engineering treatise entitled "Cost of Errors in Elevator Plants" offers valuable aid in maintenance and operation.

For more details circle NED-6821 on enclosed inquiry slip

Interoffice Business Telephones

Automatic Electric Co.—Illustrated 8-page folder 1735 explains how private "inside" business telephone systems improved efficiency of large or small business organizations. Savings, installation, equipment, planning and trial survey are discussed.

For more details circle NED-6822 on enclosed inquiry slip

Engineered Humidity

Surface Combustion Corp.—"Humidity—Engineered to Order" is 8-page illustrated bulletin that shows exactly how Kathabar humidity conditioning equipment is used in 17 industries and 43 plants to provide properly conditioned air for processing, packaging, storage and comfort. Air can be delivered with dew points and temperatures anywhere between plus and minus 100° F.

For more details circle NED-6823 on enclosed inquiry slip

Mechanical Rubber Parts & Goods

Lavelle Rubber Co.—60-page illustrated 40th Anniversary "Design Guide and Catalog" tabulates characteristics and recommended usages for both natural and synthetic rubber polymers. Included are complete design data on mechanical rubber specialties; molded, extruded, lathe cut and die cut goods; and sheet stocks. Both standard and custom molded rubber products are described.

For more details circle NED-6824 on enclosed inquiry slip

How to Surface Grind

Norton Co.—"The ABC's of Surface Grinding" is a pocket-size 96-page manual which deals with grinding know-how, wheel selection and trouble shooting. In addition to describing typical surface grinding machines, booklet contains hints on grinding procedures, wheels speeds and dressing, use of magnetic chucks, composition and performance of wheels, wheel recommendations and how to avoid and correct common grinding faults.

For more details circle NED-6825 on enclosed inquiry slip

Unit Steam Generator

Preferred Utilities Mfg. Corp.—Features of self-contained unit steam generators which permit economical service for average of 25 years are described and illustrated in 28-page bulletin No. 2000. Use is made of cutaway views. Generators range in size from 20 to 600 hp and operate on pressures up to 250 psi.

For more details circle NED-6826 on enclosed inquiry slip

MERCOID
AUTOMATIC CONTROLS
FOR INDUSTRIAL APPLICATIONS
REQUIRING POSITIVE CONTROL
OF PRESSURE, TEMPERATURE,
LIQUID LEVEL ETC.

NOTE THE FEATURES

MERCURY SWITCH
Hermetically sealed mercury switch is used. They cannot be affected by dust, dirt or corrosion; nor are they subject to open arcing, oxidation, pitting or sticking of contacts, all common causes of contact trouble. This switch will give better control service and longer control life.

BOURDON TUBE
(Hidden back of cover)
The Bourdon tube is the actuating element of the control. It is the oldest known, tried and proven element, having been used in gauges for many years.

OUTSIDE ADJUSTMENT
The outside double adjustment with the calibrated dial and pointers is a convenient feature, making it very easy to set the required operating range, plainly visible on the dial. All guesswork is eliminated.

GLASS FACE
The glass face on the cover permits seeing the entire operation of the control in plain view. One can always tell whether the switch circuit is open or closed, a great convenience whenever servicing becomes necessary.

WRITE FOR CATALOG 700 -- PLEASE MENTION THIS PUBLICATION
THE MERCOID CORPORATION
4201 BELMONT AVE. CHICAGO 41, ILL.

For more details circle NED-6827 on enclosed inquiry slip

Send for the new P Freon Cooler Catalog

If you'd like to have access to a complete source of Freon Cooler calculations, then this p-k manual is for you!

Some of the subjects, Tables, Charts, and Data Sheets: • Selection of dry expansion type Freon Coolers • Surface required per ton of refrigeration • Direct reading log mean temperature difference table • Cooler selection data sheets • Freon Cooler dimensions and data (single and two circuit) • Typical piping and control arrangements

the P
Patterson-Kelley Co., INC.
770 Burson St., E. Stroudsburg, Penna.

For more details circle NED-6828 on enclosed inquiry slip

HOW to get More Life out of V-Belts
(Storage)

DON'T store V-Belts in a hot dry room or expose to direct rays of sun.

DON'T hang belts in such a way that their shape will be distorted.

DO specify and store *Bull Dog V-Belts* in adequate supply for normal replacement requirements. With Bull Dogs "normal" replacements are few and far between.

HERE'S WHY

Their DURABLE COVERS withstand severe wearing action of the sheave while sealing the belt against grease, dirt, moisture.

There's MINIMUM STRETCH due to a new, exclusive technique which results in fewer takeup adjustments, reduced slippage, longer belt life.

There's a STRONG, SPECIALLY ENGINEERED CORD SECTION with high tensile strength, increased load carrying capacity, ability to absorb shock loads.

The belt TAKES HEAVIEST FLEXING because BWH quality-controlled compounds run cooler and do not crack or deteriorate under severe flexing.

Your BWH distributor will be glad to show how Bull Dog V-Belts have the covers, cords and compounds to cut your belting costs. Call him today.

Another Quality Product of
BOSTON WOVEN HOSE & RUBBER CO.
Warehouse Stock: 111 N. Canal St., Chicago, Ill. Distributors in all Principal Cities
PLANT: Cambridge, Mass. • P.O. Box 1071, Boston 3, Mass., U.S.A.

For more details circle NED-6829 on enclosed inquiry slip

FINGER-TIP HANDLING SPEEDS DELIVERY To GraybaR CUSTOMERS

From warehouse stock to delivery truck, heavy loads are quickly transferred by finger-tip control with this American MonoRail Overhead Handling System.

In addition to speeding up loading and unloading time, this simple inexpensive system cut handling labor, improved space utilization, reduced material damage, and bettered working conditions.

It can be done in your plant and an American MonoRail engineer will gladly tell you how.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

For more details circle NED-6830 on enclosed inquiry slip

SYNTRON

"Electromagnetic"

HAMMER DRILLS

with Automatic Drill Bit Rotation

Provide high speed hole drilling in concrete, brick and stone. The automatic rotation of the carbide-tipped spiral drill speeds hole drilling, eliminates manual turning of drill chuck and reduces fatigue.

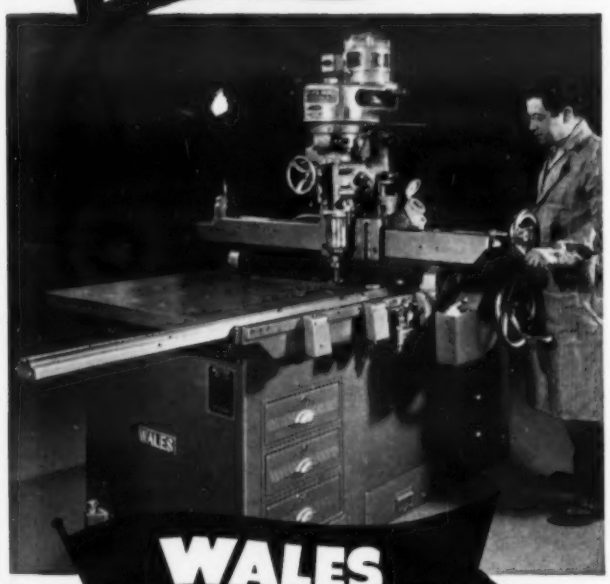
There's no cams or gears—just 3600 powerful blows per minute of one working part—The Piston!

Write Today For FREE Catalog Folder

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-6831 on enclosed inquiry slip

ANNOUNCING



WALES drilling machine with new boring head

WALES new Deluxe Model Drilling Machine has been developed for more versatile operations including BORING, DRILLING, REAMING and CLOSE TOLERANCE LOCATING. *There is no other boring and drilling machine or jig borer like it.* Precision, speed and ease of operation are built right into this machine.

Accuracy is the primary consideration in manufacturing this exclusive Wales Drilling Machine that handles material of practically any length and up to 36" wide.

A pair of built-in "Scan-A-Scales" calibrated in ten thousandths of an inch accurately locate head and slide rail after rough positioning by rapid traverse.

This is too BIG a story to tell here so write TODAY for fully-illustrated, functionally-colored Catalog DM.

WALES-STRIPPIT CORPORATION
GEORGE F. WALES, *Chairman*
363 PAYNE AVE., NORTH TONAWANDA, N. Y.
(Between Buffalo and Niagara Falls)
WALES-STRIPPIT OF CANADA LTD., HAMILTON, ONTARIO
Specialists in Punching and Notching Equipment

SCAN-A-SCALES

Showing the 2 built-in "Scan-A-Scales" that accurately locate drill head and slide rail for "zeroing in". Air locking clamps hold the work rigid during drilling operations.

For more details circle NED-6832 on enclosed inquiry slip

New Literature & Catalogs

Mechanical Engineers' Handbook

Over 2000 illustrations, charts and graphs plus 800 tables are included in thoroughly indexed revised Fifth Edition of "Marks' Mechanical Engineers' Handbook." This complete guide and technical reference volume contains 2236 pages of facts, figures, formulas, process details and other data dealing with the broad subject of mechanical engineering. All of the latest developments in equipment, processes, theory, materials and practice are incorporated. No engineering department should be without a copy. Price is $15. Published by McGraw Hill Book Co., 330 W. 42nd St., New York 36, N. Y.

For more details circle NED-6833 on enclosed inquiry slip

Process Controllers

Foxboro Co.—In the 32 pages of illustrated bulletin 460 are described eight types of model 40 controller for industrial process applications. Types are single action, dual, duplex, auto-selector, ratio, relation, Pneumatic set and time schedule. Bulletin has 114 illustrations and diagrams which aid in understanding and applying advanced principles of automatic control.

For more details circle NED-6834 on enclosed inquiry slip

Electron Microscope

Radio Corp. of America, RCA Victor Div.—"The Electron Microscope at Work in Industry" is title of booklet 2R8195 which describes ten case histories in which this instrument has been at work solving everyday problems of quality control, product improvement and development of new products.

For more details circle NED-6835 on enclosed inquiry slip

Air Valves

Rivett Lathe & Grinder, Inc.—Nineteen different air valves are illustrated and described in 12-page catalog section 303. Working drawings, specifications and cut-away views are included for each model. Design features of hand, foot, solenoid, cam, pilot, speed control and sequence types are detailed. Five sizes for pressures up to 150 psi are made.

For more details circle NED-6836 on enclosed inquiry slip

Personnel Administration

Integrating both the philosophical and practical approaches to personnel administration, this 683-page book "Modern Principles and Practices of Personnel Administration" covers functions of employing, training and administering the work force. Broader relationships of management with labor unions and the community are also covered. Over 100 charts, illustrations and diagrams are used. Author is W. W. Waite, associate professor of industrial engineering, Columbia University. Available from Ronald Press Co., 15 E. 26th St., New York 10, N. Y., for $7.00.

For more details circle NED-6837 on enclosed inquiry slip

For more details circle NED-6838 on enclosed inquiry slip

Handles ANY Job Requiring a Baked Finish

Despatch FINISH BAKING OVENS

Minneapolis-Honeywell Regulator Company . . . operates a number of Despatch Ovens for various jobs. The operator running the above RS-4 Electric Finish Baking Oven, for baking finishes on relay cases, is particularly enthusiastic. He likes the accurate temperature control, ease of loading and avoidance of heat loss. He figures that the RS Oven, installed in 1946, paid for itself years ago through the saving in drying time. Does your operation require controlled, uniform heat up to 500°?

Write for the Despatch RS Bulletin.

DESPATCH OVEN CO. Established in 1902

Manufacturers of ovens for: Paint Finishing...Dehydrating . . . Curing . . . All Industrial and Laboratory Applications.

325 DESPATCH BLDG., MINNEAPOLIS 14, MINN.

For more details circle NED-6839 on enclosed inquiry slip

ASSEMBLING—Wire stitcher fastens metal parts up to 10 times faster

Bostitch Metal Stitchers are reported to provide the fastest known method of fastening aluminum, copper and cold-rolled steel sheet forms to each other and to rubber, plastics, fabrics.

These powerful machines manufacture their own staples out of heavy steel wire and drive them as fast as 295 stitches a minute. Because of this power and speed, many users report 50% to 90% savings in assembly time as compared with cementing, spot-welding, riveting, bolting.

Other advantages of fastening metal parts with Bostitch metal stitchers are that they provide a self-inspecting method and require less skill on the operator's part for high-speed production.

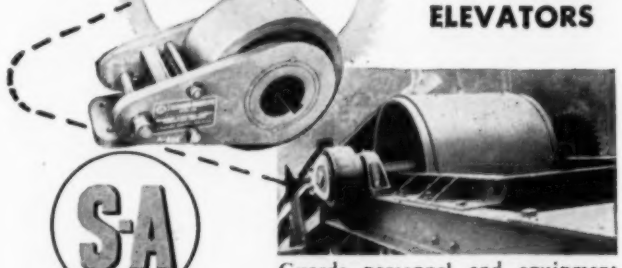
Bulletin 273 shows how and where Bostitch Metal Stitchers save time, labor, and money.

BOSTITCH®
742 Mechanic Street, Westerly, Rhode Island

For more details circle NED-6840 on enclosed inquiry slip

PROTECTS

AGAINST RUNAWAY LOADS ON CONVEYORS and BUCKET ELEVATORS



S-A

"ROLLER-TYPE" HOLD-BACKS

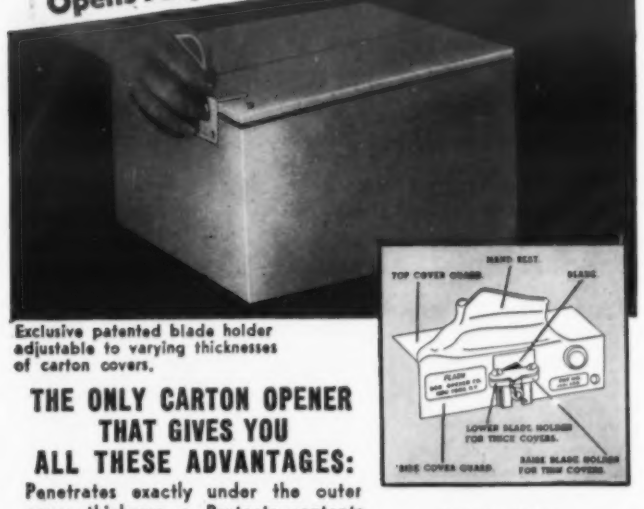
Guards personnel and equipment against injury — prevents flooded feed points. Roller-and-wedge mechanism engages as soon as headshaft stops rotating forward. No roll-back, no jolt or shock. Releases the instant power is applied.

MAIL COUPON TODAY for full data on safety features

STEPHENS-ADAMSON MFG. CO. (S-A)
12 RIDGEWAY AVE., AURORA, ILLINOIS
Please send me bulletin No. 651 on S-A Hold-Back
Name.....
Company.....
Address.....
City.....Zone...State.....

For more details circle NED-6841 on enclosed inquiry slip

Amazing
FLASH BOX OPENER
Opens Any Carton Quicker . . . Cleaner



Exclusive patented blade holder adjustable to varying thicknesses of carton covers.

THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. *Already accepted by leading industries.*

Retail Price
$1.75

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

▲ For more details circle NED-6842 on enclosed inquiry slip ▲

NEW SKINNER SOLENOID VALVE
EXPLOSION PROOF
TYPE X5

THE new Skinner X5 Solenoid Valve is basically the same as the widely accepted and tested V5, but modified to a construction that is Underwriters' approved for Class I, Group D hazardous locations. Small size and lightweight features are retained, and the X5 is low in price because of the many parts which are interchangeable with other Skinner valves. Rating is 10 watts max.; soft, spring loaded seals prevent leakage; internal parts are stainless steel; wide variety of port locations in 1/8" and 1/4" size; most types available for metering; for AC or DC in a wide range of voltages and frequencies; can be mounted in any position; supplied as two-way normally open or closed, three-way normally open, closed or directional flow. *Write today for details!*

SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
135 Belden Ave., Norwalk, Conn.

▲ For more details circle NED-6843 on enclosed inquiry slip ▲

Relays BY GUARDIAN

Series 595 D.C.

See ball game scores posted automatically on electric scoreboards, or watch the Signal Corps in the field with telephone sets—walkie talkies—ground to plane—ship to shore communications to witness perfect operation of Guardian Relays. Place your confidence in Relays by Guardian—expertly designed to your specifications. For example, the Guardian 595 D. C. Relay is unusual in the amount of power it provides. Up to 6 P. D. T. contact combinations on the standard open mounted unit. Ingenious Guard-O-Seal engineering produces an amazingly compact, *hermetically sealed* unit. Your choice of terminal types in a light weight aluminum container to accommodate up to 4 P. D. T. contact combinations. Write.

GUARDIAN ELECTRIC
1626-H W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

▲ For more details circle NED-6844 on enclosed inquiry slip ▲

New Literature & Catalogs

If Atomic War Strikes

Diebold, Inc., Flofilm Div.—Suggestions for the protection of valuable records, drawings and other information in case of bombing attacks or other disasters are given in 28-page illustrated booklet "Plan for Record Survival." Subjects covered include which records to protect, protection methods, selecting equipment and split-risk storage. Nominally priced at $1.00, manual is available gratis to management executives.

▲ For more details circle NED-6845 on enclosed inquiry slip ▲

Reinforced Laminated Plastics

Russell Reinforced Plastics Corp.—Low pressure laminate of reinforced Fiberglas, Nylon or other materials called Reinflastics is described in 16-page illustrated brochure. Product is lighter than aluminum, but as strong as steel. Properties, various applications and production of different forms, including flat panels, molded parts, expanded and others, are covered.

▲ For more details circle NED-6846 on enclosed inquiry slip ▲

Marking Machine

Jas. H. Matthews & Co.—Series of Matthews 204 general purpose marking machines, ranging from hand-operated models to heavy duty pneumatic-operated models, is described and illustrated in 4-page bulletin. Marking principles and types of articles that can be marked are detailed.

▲ For more details circle NED-6847 on enclosed inquiry slip ▲

Automatic Gaging & Sorting

Federal Products Corp.—20-page illustrated technical bulletin explains operation and uses of high speed automatic gaging and sorting equipment. Systems employ electro-mechanical and electronic systems to production check and sort all types of products within extremely accurate limits.

▲ For more details circle NED-6848 on enclosed inquiry slip ▲

Hydraulic Elevators

Globe Hoist Co.—Both passenger and freight elevators are discussed in 16-page illustrated bulletin OilLIFT Elevators." Types are available for installation in up to five-story buildings. Easy to install, elevators are powered by motor driven hydraulic pump.

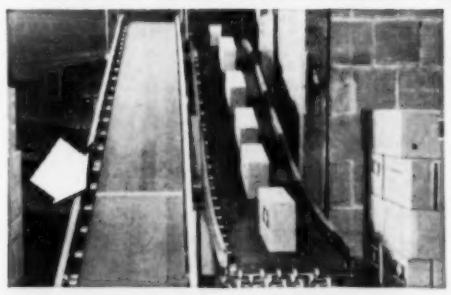
▲ For more details circle NED-6849 on enclosed inquiry slip ▲

Protective Paper Products

National Waterproof Papers, Inc.—6-page illustrated folder explains advantages offered by Natco multi-wall shipping bags, carload retaining paper, spiral wrapping paper and variety of custom-made liners and specialties made of creped kraft which afford protection against water, moisture, grease, siftage and contamination.

▲ For more details circle NED-6850 on enclosed inquiry slip ▲

ALLIGATOR®
CONVEYOR BELT LACING



Every Tooth A Vise*

in Long Continuous Lengths for Conveyor Belts . . . . .

★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
★ In canneries where corrosion or rust is a problem specify Alligator made of Stainless or Monel.
★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
★ Separable and smooth on both sides.
★ 12 sizes. For belts from 1/16" to 5/8" thick—and *any width.*

Order from Your Supply House. Ask for Bulletin A-60.

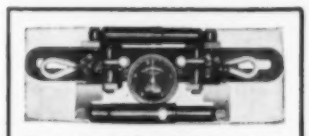
FLEXIBLE STEEL LACING CO. 4664 Lexington St., Chicago 44, Ill.

JUST A HAMMER TO APPLY IT

▲ For more details circle NED-6851 on enclosed inquiry slip ▲

DILLON DYNAMOMETERS can solve your tension or stress problems

The perfect instrument for indicating tension or stress in cable, rope, castings, assemblies, etc.—in field or laboratory. Easy to use in close quarters—measures 8¼" x 6¼" x 3", weighs only 8 lbs. 4 oz. Not injured by accidental overload. Has safety glass cover and maximum hand. 500 to 100,000 lb. capacities. Low cost. Immediate shipment.



By using a Dillon Dynamometer in this special draw-bar arrangement, the Ruth Company, Denver, Colorado, manufacturers of mining locomotives, has proved a money-saving point. They found that locomotive horsepower—not weight—is the all-important factor in achieving economical mine haulage. Result: thousands of dollars saved in several mines!

Write today for illustrated bulletin

W. C. Dillon & Co., Inc.
1421 NE South Circle Ave.
FOREST PARK, ILLINOIS

▲ For more details circle NED-6852 on enclosed inquiry slip ▲

CALCULAGRAPH
figures elapsed time accurately

Reliable job time records are essential for compiling correct cost data, estimating reorders and checking on production efficiency. One sure way to secure accurate to the minute, dependable time costs is to use Calculagraph automatically-figured elapsed time records. Calculagraph gives you total elapsed time, starting and finishing time and date on a permanent, printed reference card. Eliminate losses due to inaccurate job time calculations by using Calculagraph to time your operations.

Write for full information today, to Dept. A.

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

▲ For more details circle NED-6853 on enclosed inquiry slip ▲

FOLD • SEAL • MAIL

Have You Filled In Your Name and Address?

FOLD TO THIS LINE

To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

6100	6150	6200	6250	6300	6350	6400	6450	6500	6550	6600	6650	6700	6750	6800	6850	6900	6950	7000	7050
6101	6151	6201	6251	6301	6351	6401	6451	6501	6551	6601	6651	6701	6751	6801	6851	6901	6951	7001	7051
6102	6152	6202	6252	6302	6352	6402	6452	6502	6552	6602	6652	6702	6752	6802	6852	6902	6952	7002	7052
6103	6153	6203	6253	6303	6353	6403	6453	6503	6553	6603	6653	6703	6753	6803	6853	6903	6953	7003	7053
6104	6154	6204	6254	6304	6354	6404	6454	6504	6554	6604	6654	6704	6754	6804	6854	6904	6954	7004	7054
6105	6155	6205	6255	6305	6355	6405	6455	6505	6555	6605	6655	6705	6755	6805	6855	6905	6955	7005	7055
6106	6156	6206	6256	6306	6356	6406	6456	6506	6556	6606	6656	6706	6756	6806	6856	6906	6956	7006	7056
6107	6157	6207	6257	6307	6357	6407	6457	6507	6557	6607	6657	6707	6757	6807	6857	6907	6957	7007	7057
6108	6158	6208	6258	6308	6358	6408	6458	6508	6558	6608	6658	6708	6758	6808	6858	6908	6958	7008	7058
6109	6159	6209	6259	6309	6359	6409	6459	6509	6559	6609	6659	6709	6759	6809	6859	6909	6959	7009	7059
6110	6160	6210	6260	6310	6360	6410	6460	6510	6560	6610	6660	6710	6760	6810	6860	6910	6960	7010	7060
6111	6161	6211	6261	6311	6361	6411	6461	6511	6561	6611	6661	6711	6761	6811	6861	6911	6961	7011	7061
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6119	6169	6219	6269	6319	6369	6419	6469	6519	6569	6619	6669	6719	6769	6819	6869	6919	6969	7019	7069

FOLD TO THIS LINE

6120	6170	6220	6270	6320	6370	6420	6470	6520	6570	6620	6670	6720	6770	6820	6870	6920	6970	7020	7070
6121	6171	6221	6271	6321	6371	6421	6471	6521	6571	6621	6671	6721	6771	6821	6871	6921	6971	7021	7071
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6123	6173	6223	6273	6323	6373	6423	6473	6523	6573	6623	6673	6723	6773	6823	6873	6923	6973	7023	7073
6124	6174	6224	6274	6324	6374	6424	6474	6524	6574	6624	6674	6724	6774	6824	6874	6924	6974	7024	7074
6125	6175	6225	6275	6325	6375	6425	6475	6525	6575	6625	6675	6725	6775	6825	6875	6925	6975	7025	7075
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6132	6182	6232	6282	6332	6382	6432	6482	6532	6582	6632	6682	6732	6782	6832	6882	6932	6982	7032	7082
6133	6183	6233	6283	6333	6383	6433	6483	6533	6583	6633	6683	6733	6783	6833	6883	6933	6983	7033	7083
6134	6184	6234	6284	6334	6384	6434	6484	6534	6584	6634	6684	6734	6784	6834	6884	6934	6984	7034	7084
6135	6185	6235	6285	6335	6385	6435	6485	6535	6585	6635	6685	6735	6785	6835	6885	6935	6985	7035	7085
6136	6186	6236	6286	6336	6386	6436	6486	6536	6586	6636	6686	6736	6786	6836	6886	6936	6986	7036	7086
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6142	6192	6242	6292	6342	6392	6442	6492	6542	6592	6642	6692	6742	6792	6842	6892	6942	6992	7042	7092
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6144	6194	6244	6294	6344	6394	6444	6494	6544	6594	6644	6694	6744	6794	6844	6894	6944	6994	7044	7094

FOLD ON THIS LINE

6145	6195	6245	6295	6345	6395	6445	6495	6545	6595	6645	6695	6745	6795	6845	6895	6945	6995	7045	7095
6146	6196	6246	6296	6346	6396	6446	6496	6546	6596	6646	6696	6746	6796	6846	6896	6946	6996	7046	7096
6147	6197	6247	6297	6347	6397	6447	6497	6547	6597	6647	6697	6747	6797	6847	6897	6947	6997	7047	7097
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6149	6199	6249	6299	6349	6399	6449	6499	6549	6599	6649	6699	6749	6799	6849	6899	6949	6999	7049	7099

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72

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees.....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

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Cleveland, Ohio

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Principal Products Manufactured .....

..... Approximate Number of Employees in Plant .....

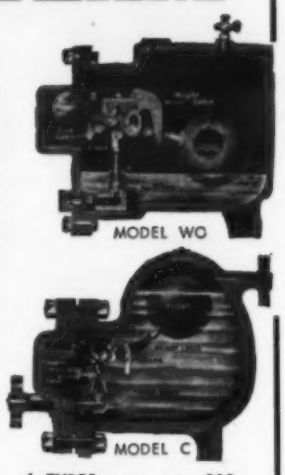
Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME ..... TITLE .....

NAME ..... TITLE .....

NICHOLSON W. O. TRAPS
CANNOT LEAK LIVE STEAM

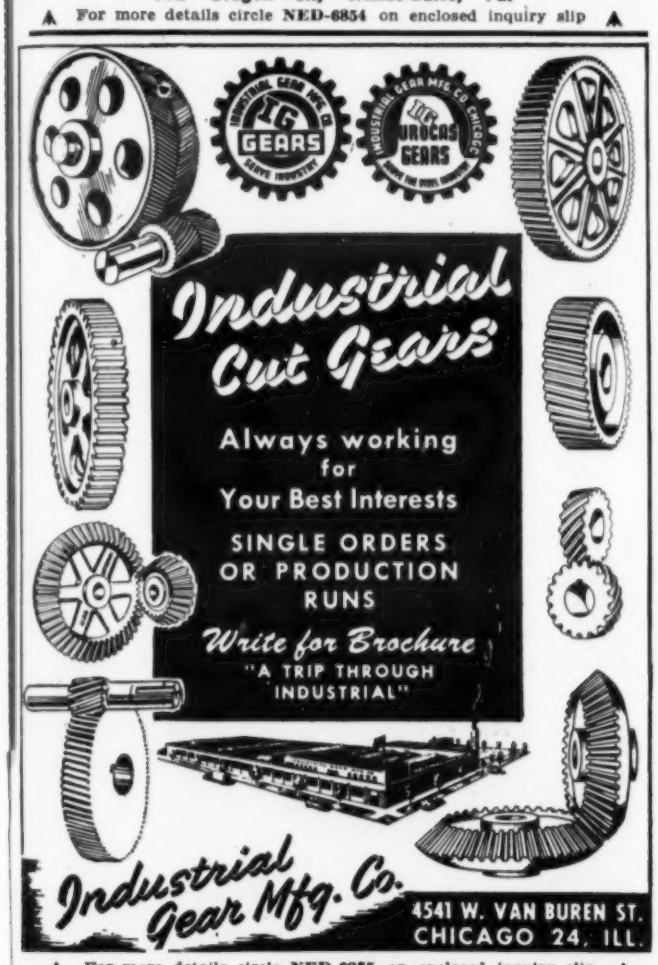
Even though re-evaporation completely dries up its body, a Nicholson weight-operated trap will not leak steam. These units do not depend on buoyancy of float to raise valve. Other features: large orifices keep valve clean; non-wire drawing; rugged for unavoidable abuse; not easily affected by dirt, pulsation; of stainless steel where it counts. Widely used for steam purifiers, superheated steam lines, headers, separators, heaters, dry kilns, pipe coils, turbine throttle valve drips, stop and check valves, etc. Also for air and gasoline.



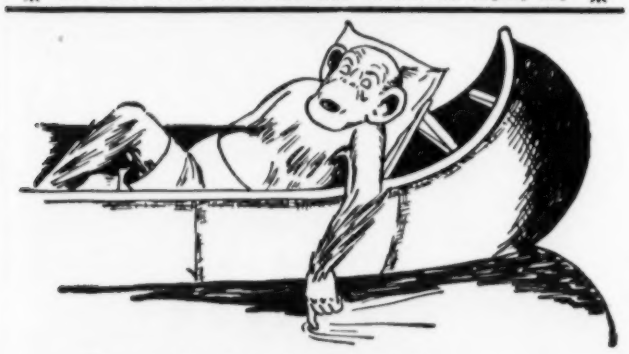
CATALOG 751

4 TYPES—press. to 200, 500, 650, 1500 lbs.

W. H. NICHOLSON & CO.
TRAPS · VALVES · FLOATS
162 Oregon St., Wilkes-Barre, Pa.
For more details circle NED-6854 on enclosed inquiry slip



For more details circle NED-6855 on enclosed inquiry slip



Grease Monkeys have retired
—since Transall took over

Pre-Lubricated
Belt Conveyor Idlers

No Lubrication Labor
No Lubricant Cost

TRANSALL INC.
Manufacturers of a complete line of Belt Conveyor Equipment
119 North 11th St. Birmingham 4, Ala.
For more details circle NED-6856 on enclosed inquiry slip

New Literature & Catalogs

Rolled Glass

Mississippi Glass Co.—Coincidental with the launching of a new department known as the Architectural Promotion Div., company has issued a 20-page handbook for architects, engineers and building managers entitled "ABC's of Rolled Glass." Data are given on types of rolled glass produced, diffusion pattern of each, decorative effects, heat absorption, protection and application.

For more details circle NED-6857 on enclosed inquiry slip

Air Handling, Cleaning & Conditioning

Westinghouse Electric Corp., Sturtevant Div.—60-page illustrated catalog 600 deals with air and how to put it to profitable use. Such subjects as how to heat and ventilate plant areas; how to size an air conditioning system; how to exhaust fumes, gases or dusts; how to convey metal chips, sawdust, wool or grains; and how to eliminate air-borne dirt are covered thoroughly. Charts, tables, formulas and engineering data related to handling, cleaning and conditioning of air are included.

For more details circle NED-6858 on enclosed inquiry slip

Handbook of Metallurgy

E. F. Houghton & Co.—New production problems facing metallurgists in our defense economy are dealt with in new edition of "Practical Metallurgy for Engineers," a 599-page illustrated handbook. This revised book has 120 more pages that previous 1943 edition, and covers innovations such as flame and induction heating, heat treating of nonferrous alloys and latest AISI steel classifications. List price is $3.50. Published by E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

For more details circle NED-6859 on enclosed inquiry slip

Duct, Exhaust & Ventilating Fans

American Machine & Metals, Inc., DeBothezat Fans Div.—Revised 8-page illustrated bulletin DB-4-52 gives application and performance data on line of Bifurcators. These fan units are designed especially for handling fumes or gases that are abnormally hot, flammable or explosive. Direct drive fan is mounted in divided housing so that motor is isolated from destructive gases. Sizes range from 12 to 48 in. for handling up to 45,000 cfm.

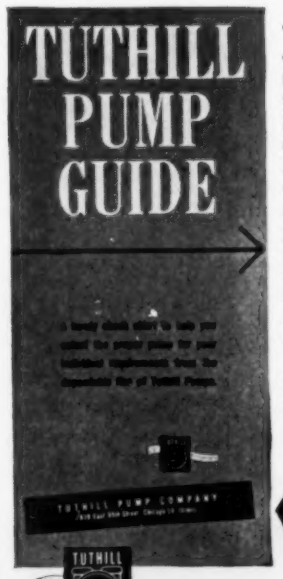
For more details circle NED-6860 on enclosed inquiry slip

Metalworking Wax Lubricants

S. C. Johnson & Son, Inc.—The story of Johnson's wax lubricants and their use in drawing and forming, impact extrusion, cold heading, drilling, reaming, piercing, blanking, cutting, routing and other metalworking operations is told in 20-page illustrated booklet. Basic requirements for good lubrication are outlined, and operations in which wax lubricants are most practical are listed.

For more details circle NED-6861 on enclosed inquiry slip

HOW TUTHILL HELPS YOU
Fit the Pump to the Need...
Not the Need to the Pump!



The Tuthill line of positive displacement internal-gear rotary pumps is so flexible that you can find just the pump to fit your need for lubrication, coolant, hydraulic service and liquid transfer. There are mechanically sealed pumps—automatic reversing models—pumps with internal by-pass feature—and stripped models that can be built directly into the design of your equipment. So why attempt to fit the need to the pump?

The new Tuthill Pump Guide provides a quick reference chart to help select the right oil pump for your job.

WRITE FOR YOUR COPY TODAY!

25th Anniversary TUTHILL PUMP COMPANY
939 East 95th Street, Chicago 19, Illinois
For more details circle NED-6862 on enclosed inquiry slip

KNURLED SOCKET HEAD®
Cap Screws AND Stripper Bolts

Knurled heads assure a firm finger grip for quick setting by hand . . . key type hexagon socket wrenches assure easy driving, even in awkward locations . . . precision threads assure greater thread bearing and resistance to stripping.

Send for this folder for complete catalog and purchasing information.

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue, Chicago 50, Illinois
For more details circle NED-6863 on enclosed inquiry slip

LEPEL offers a New
LOW COST High Frequency HEATING UNIT

AT A PRICE SO LOW THAT NO MACHINE SHOP, TOOL ROOM OR LABORATORY CAN AFFORD TO BE WITHOUT IT!

Unit illustrated brazing carbide tips to cutting tools. Shanks up to 1½" square can be satisfactorily brazed.

• SMALL and COMPACT
Conveniently operated on bench or table—no mounting necessary.

• ECONOMICAL OPERATION
No special power installation required. Operates on 110 volts, 60 or 50 cycle line at unity power factor.

DOES ALL THESE JOBS Faster, Better and Cheaper
BRAZING, SOLDERING HARDENING, ANNEALING DRAWING AND MELTING

• FULLY GUARANTEED
Guaranteed for continuous duty cycle and stated performance.

• LOW COST
Complete unit with line connection and load coil
$870.00 f.o.b. factory

WILL HEAT TO 1500 F.
⅛" steel rod 1" length in approx. 1 second
¼" " " " " 3 seconds
½" " " " " 15 seconds
1" " " " " 60 seconds
Will melt 4 ounces of brass or steel in 4 minutes.
Equally well suited for heating of non-ferrous metals.

HARDEN SOLDER LepeL HIGH FREQUENCY LABORATORIES, INC. BRAZE MELT
55th ST. and 37th AVE., Woodside, New York City 77, N. Y.
For more details circle NED-6864 on enclosed inquiry slip

WON'T SMUDGE • RESISTS: DIRT GREASE WATER ACIDS

LABELON PLASTIC Write on it TAPE

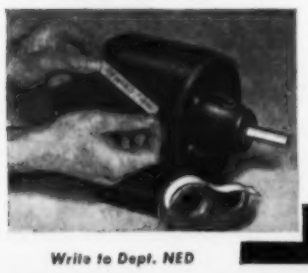
STICKS WITHOUT MOISTENING

FOR SHOP, TOOLROOM, LABORATORY, OFFICE, ETC.

Nothing else like LABELON—the amazing "Write on it" plastic tape! Use it to identify hard-to-mark stock samples, patterns; for bin labeling and tool tagging; for indicating repairs and adjustments; for marking laboratory equipment, supplies, tests; for panel boards and wiring; for labeling office files, folders, etc.

LABELON TAPE sticks without moistening to any smooth, clean surface — yet can be quickly removed. Resists heat up to 160°. Just write on it with pencil or stylus—message won't smudge. Choice of widths and colors. Handy dispenser with cutter bar.

See your nearest dealer, or write for sample and prices.



Write to Dept. NED

LABELON TAPE CO., INC.
450 Atlantic Ave., Rochester 9, N. Y.

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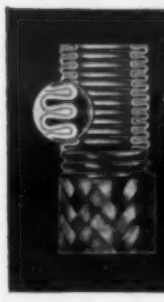
CMH REX-WELD
corrugated flexible metal hose



the answer to leakproof conveyance of high pressure, high temperature liquids and gases

REX-WELD is manufactured in both bronze and steel with helical or annular corrugations, braided or unbraided. It is particularly suited for installations where vibration is a problem or where hose is subjected to prolonged flexing or bending.

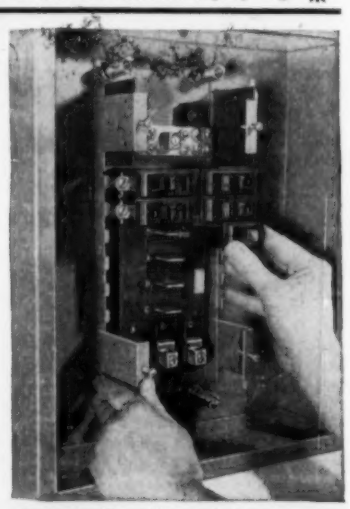
The range of applications for REX-WELD is virtually unlimited. It is capable of handling pressures to 6000 psi. and temperatures to 1000° F. Leakproof, even for searching liquids and gases.

Write for complete data

CMH

CHICAGO METAL HOSE
DIV. FLEXONICS CORPORATION
1343S. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-6866 on enclosed inquiry slip



NEW CLASS I PANELBOARD IS *FIRST* WITH PLUG-IN BREAKER

Trumbull's new line of NLTQ Panelboards introduces the first *plug-in* circuit breaker with quick-make, quick-break. Also: thermal-magnetic protected, physically interchangeable breakers.

OTHER NEW FEATURES
Interior—spring-mounted, self-aligning.
Molded-in-plastisol busbar and stab assembly.
Sequence phasing—in all sizes

Write for Bulletin TEB-14, THE TRUMBULL ELECTRIC MANUFACTURING COMPANY, Plainville, Conn.

TRUMBULL ELECTRIC

Department of General Electric Company, Plainville, Conn.

For more details circle NED-6867 on enclosed inquiry slip

New Literature & Catalogs

Metal Boxes & Chests

Waterloo Valve Spring Compressor Co.—Complete line of standard and custom-built metal boxes and chests is subject of 12-page illustrated catalog 50. Company is prepared to produce metal stands, cabinets, racks, instrument cases and display tables to meet any requirement.

For more details circle NED-6868 on enclosed inquiry slip

Chemical Fortified Concrete

Flexrock Co.—Company folder gives complete information on AWOG, a chemical added to concrete to produce long-wearing floors that are resistant to acid, water, oil and grease.

For more details circle NED-6869 on enclosed inquiry slip

Metal & Wood Air Sanders

Sundstrand Machine Tool Co., Pneumatic Div.—"Better, Faster Finishing for Production and Maintenance Jobs" is title of bulletin 2109 which gives advantages of straight-line sanding action; illustrates how air sanders are used for various plant operations; and gives specifications on four models of air sanders and accessories. Best methods to use on wood, metal and plastics are discussed.

For more details circle NED-6870 on enclosed inquiry slip

Mechanical Stirrups

Albina Engine & Machine Works—General information and performance data on Albina stirrups which raise or lower work stages or platforms for glazing, steamcleaning, painting, and other operation on such structures as bridges, tanks, towers, buildings is contained in 6-page illustrated folder. Units are air or electric-powered and move up at rate of 18 fpm.

For more details circle NED-6871 on enclosed inquiry slip

Alloy & Stainless Valves

Fabri-Valve Co. of America—Two 4-page illustrated catalogs cover design, performance, installation and features of stainless steel and alloy fabricated valves, offered in variety of sizes for diversified uses.

For more details circle NED-6872 on enclosed inquiry slip

Abrasive Belt Polishing

Behr-Manning Corp.—Advantages of coated abrasive belt polishing methods are set forth in 28-page instructive booklet "How Polisher Pete Put Economy in Polishing" which makes liberal use of cartoon technique.

For more details circle NED-6873 on enclosed inquiry slip

Machine Tools

Multiversal Machine Co.—Advanced ideas on shop practice as reflected in a 20-year survey are illustrated in 12-page brochure entitled "Hack Multiversal Machine Tools." Specifications on various model machines are tabulated.

For more details circle NED-6874 on enclosed inquiry slip

READY!
AIR CYLINDERS AND VALVES

With a valve to suit the job air cylinders can be made to work wonders. Mead Air Valves, Single and Double Acting Air Cylinders, will help you cut costs, speed up work. Write for complete new Catalog of famous Mead air-operated devices!

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. N-72-A, CHICAGO 41, ILL.

For more details circle NED-6875 on enclosed inquiry slip

INDUSTRIAL DOORS
"PACKAGED"—*Ready to Install*

A 3 hour job for any maintenance crew.

Only the Prest-O-Matic comes to you with door and jambs, and all hardware including motor operator, completely assembled. This is your guarantee of perfect performance.

★ OPEN OR CLOSE IN 3½ SECONDS
★ PERMITS FULL USE OF DOORWAY WIDTH
★ NO ALTERATIONS OR FITTING NEEDED
★ SEALED AGAINST WEATHER OR WIND

PREST-O-MATIC

Industrial Doors function faultlessly because they are designed "in balance", utilize thrust and roller bearings and operating mechanism adequate to heaviest usage. Pneumatic, Pull-cord, Floor Plate or Electric Eye optional.

Write for Catalog!

CLARK DOOR COMPANY
511 Hunterdon Avenue, Newark 8, N. J.

For more details circle NED-6876 on enclosed inquiry slip

Provide an
ACCURATE PRINTED RECORD *of* PRODUCTION
with Model 5-PVR-1
PRODUCTIMETER

This printing counter installed on a 50 ton Niagara Punch Press performs a dual role:

1. It registers exact number of parts produced
2. It provides a PRINTED record of production (in multiple copies, if desired)

Record systems using this method reflect the accuracy and savings that result from clear, clean records with no errors due to misinterpretation.

Send for Catalog No. 75

DURANT MANUFACTURING CO.
1922 N. Buffum St., Milwaukee 1, Wis.
122 Orange St., Providence 3, R.I.
Representatives in Principal Cities

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EXPECT EVERYTHING IN
SERVICE
from
Safe — Non Skid

YOU'LL GET
- Study of Your Specific Floor Problem
- Cost - Cutting FLINTZ Recommendations
- "On-the-Spot" Installation Instructions
- Periodic "Check-up" Service Calls

A FEW TERRITORIES OPEN FOR MANUFACTURERS REPRESENTATIVES.

"SERVICE" has an important double meaning with FLINTZ. First—it's the close personal attention you get from the Dura-Tred Engineers . . . both before and AFTER your floor is modernized with non-skid, low-traction FLINTZ. Second—it's the all-out efficiency this hard, durable, thin-section resurfacer assures you FOR YEARS TO COME. Ready-mixed, easy-to-use. Spread FLINTZ like wet sand and let the trucks roll. No delay.

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For more details circle NED-6878 on enclosed inquiry slip

di-acro PUNCH

Now you can punch holes of various shapes as large as 4" diameter in 16 gauge steel—also blank, draw, emboss, form,—all with the new DI-ACRO Punch. It is ideal for both experimental and production work.

The precision ground triangular ram of this double purpose press prevents punch head from turning, assuring perfect alignment at all times.

A Turret Stripper of exclusive DI-ACRO design automatically strips material from punches of all shapes. Roller Bearing cam action develops 4-ton pressure with minimum effort. Adjustable gauges assure exact location of holes.

Send for **"DIE-LESS DUPLICATING"** *Catalog*

Gives the full story of the DI-ACRO Punch, and also DI-ACRO Benders, Brakes, Shears, Rod Parters, Notchers, as well as the new DI-ACRO Vari-O-Speed Powershear and Hydra-Power Bender.

DI-ACRO is pronounced "DIE-ACK-RO"

DI-ACRO PRECISION MACHINES DIE-LESS DUPLICATING

O'NEIL-IRWIN MFG. CO.

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Saves time and money inspecting small dimensions . . .

Nothing else like it! A precision optical measuring instrument for fast, accurate inspection of small dimensions. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as radii, angles, chamfers, threads and small holes on production parts.

PRICE **$36.00**

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A product of **BELL & HOWELL CO.** Distributed by

See Your National Tool Co. Representative or Local Jobber

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POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

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For complete information—without obligation—write

THE HALLEMITE MFG. CO.

2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1929

▲ For more details circle **NED-6881** on enclosed inquiry slip ▲

New Literature & Catalogs

Principles of Optical Gaging

Eastman Kodak Co., Industrial Optical Sales Div. —Publication entitled "Optical Gaging" which describes recent developments in this work points out that accuracy, speed and economy can be achieved in modern production inspection through use of optical projection gaging techniques. Elements of gage, staging fixture principles and desirable characteristics in projector are outlined.

▲ For more details circle **NED-6882** on enclosed inquiry slip ▲

Torque Converter—Hydraulic Coupling

Torcon Corp. — Heavy duty automatic hydraulic torque converter described and illustrated in bulletin TC-639 handles variable loads at variable speeds. It combines a hydraulic torque converter and hydraulic coupling in a single unit and retains the advantages of both. Typical applications are depicted.

▲ For more details circle **NED-6883** on enclosed inquiry slip ▲

Roller Bearings

Roller Bearing Co. of America—The Pitchlign roller bearing, which employs a cage that guides the rollers throughout length of pitch line to eliminate skewing and cage wobbling, is described and illustrated in 16-page engineering bulletin SF-66. Dimensions of various types, shaft fits and tolerances, housing fits and tolerances, typical applications and life probability curve data are included.

▲ For more details circle **NED-6884** on enclosed inquiry slip ▲

Aluminum Alloys

Apex Smelting Co.—Tabulated in easy reference form, data covering composition, typical mechanical properties, heat treatments, and basic foundry applications of standard aluminum alloys produced by company are offered in 24-page folder "Aluminum Alloys." Each alloy is cross referenced to ASTM, SAE and Alcoa designations of alloys with similar composition and mechanical properties.

▲ For more details circle **NED-6885** on enclosed inquiry slip ▲

Motor Driven Speed Reducers

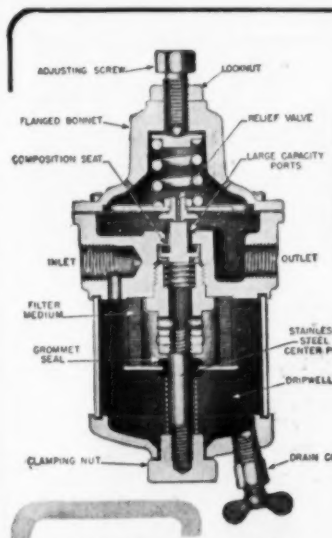
Miehle Printing Press & Mfg. Co., Star-Kimble Motor Div.—8-page illustrated bulletin B-601 describes a new line of gear motors, comprising motor and speed reducer compactly mounted in single housing, and with speed ratios ranging from 2.5:1 to 97:1. Alternating and direct current motors in various constructions are rated ½ to 75 hp.

▲ For more details circle **NED-6886** on enclosed inquiry slip ▲

Vises & Work Positioners

Wilton Tool Mfg. Co.—32-page illustrated catalog 108 deals with operation, capacities and applications of various types of bench and machinists' vises and of Powrarm positioners which speed up assembly, machining and production line work.

▲ For more details circle **NED-6887** on enclosed inquiry slip ▲



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Cono-Controls

CC-116

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(NEGATIVE TEMPERATURE CO-EFFICIENT CERAMIC RESISTORS)

● These temperature responsive resistors are useful as temperature measuring elements and as liquid level sensors; they are especially well suited to compensation where the circuit constants must be maintained irrespective of temperature changes. Since they are a fired ceramic, they are stable under practically all conditions and respond only to temperature changes.

Typical application in capsule form for temperature sensing of hydraulic oil.

Many other values can be obtained from standard diameter material. Because the thermistors are made in our own plant, under extremely careful control, special compositions, shapes, and resistance values, hermetically sealed or otherwise protected, can be made in any quantities to suit your individual requirements.

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Size (inches)	@ +30°C.	@ 0°C.	@ −30°C.
.140 x ¾	45 ohms	88 ohms	193 ohms
.040 x 1.5	14,000 ohms	29,946 ohms	74,676 ohms
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▲ For more details circle **NED-6889** on enclosed inquiry slip ▲

LIQUAMATTE and *your future*

what SIMPLIFIED WET BLASTING means to you

Through development of wet blasting, large savings have been made possible in finishing costs . . . and now Liquamatte makes wet blasting EVEN MORE practical, economical and convenient. The Liquamatte has 14 advanced design features that overcome the many operating difficulties usually found in wet blasting. Thus it reduces finishing costs to the very minimum. With the Liquamatte, "hand" finishes are produced mechanically in a matter of seconds, eliminating many tedious operations. Precision parts can be processed while holding tolerances of .0001". Scale and directional grinding lines are uniformly removed, greatly prolonging the life of expensive tools and dies.

Typical heat treated forging die, one half of which has been cleaned with the Liquamatte using a fine mesh Liquabrasive.

SEND TODAY FOR BULLETIN 23

It shows how Liquamatte's simplified design has reduced precision finishing costs to a new low.

American LIQUAMATTE WET BLASTING

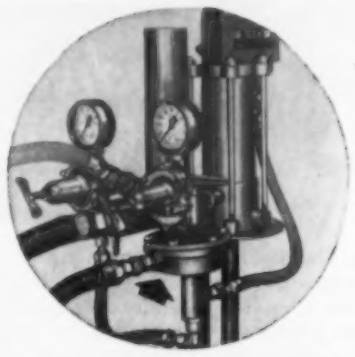
WHEELABRATOR & EQUIPMENT CORP.

508 S. Byrkit St., Mishawaka 8, Ind.

▲ For more details circle **NED-6890** on enclosed inquiry slip ▲

NEW!

Binks material handling pumps with **SURGE CONTROL**



Now you can spray all types of materials with Binks air piston material pumps smoothly and evenly. No more starting "globs" or "spurts" when you trigger the spray gun. Fitted with this new control, Binks pumps deliver materials at a uniform pressure. No materials wasted; hoses last longer.

Only Binks air piston pumps have this advanced surge control. Ideal for pumping light or heavy-bodied materials. Investigate today.

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Binks EVERYTHING FOR SPRAY PAINTING

GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES

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CHOOSE THE

AIR VALVE YOU HELPED DESIGN

Best for Trigger-Quick Control of All Air Operated Equipment

FULL FLOW • COMPACT • ONE MOVING PART

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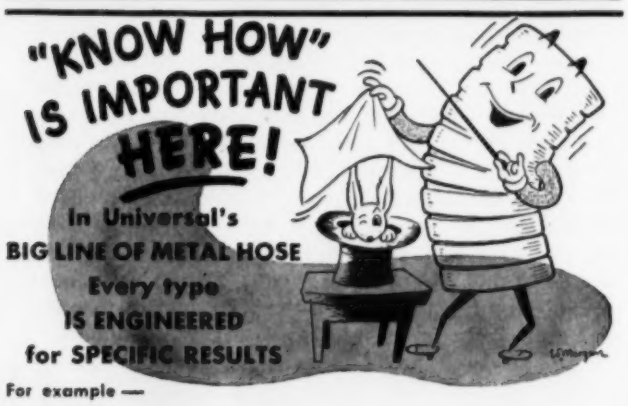
"KNOW HOW" IS IMPORTANT HERE!



In Universal's BIG LINE OF METAL HOSE Every type IS ENGINEERED for SPECIFIC RESULTS

For example —

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Square-Locked Low Pressure Hose . . . engineered for efficiency in low pressure exhaust or intake installations.

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Interlocked High Pressure Hose . . . engineered for efficiency in conveying steam, water, tar, etc.

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Seamless Bronze Hose . . . engineered for efficiency in transmitting solvents, oil, refrigerants . . . under pressure, motion and vibration.

PLUS . . .

many additional types of metal hose for every type of installation.

Send us an outline of your requirements for experienced engineered recommendations. Ask for Catalog U-101, too . . . today!

UNIVERSAL METAL HOSE CO.

2155 South Kedzie Ave. • Chicago 23, Ill.

▲ For more details circle NED-6893 on enclosed inquiry slip ▲

New Literature & Catalogs

Stainless Surface Hardening

Lindberg Steel Treating Co.—Text plus 26 illustrations and tables tells the complete story of the Malcomizing process for surface hardening stainless steels. What the process is, what it does and how it works, is related. Subjects discussed are types of steels that can be Malcomized, suggested heat treatments, selective Malcomizing, case depths, wear resistance, stability at elevated temperatures, corrosion resistance and passivation of Malcomized steels.

▲ For more details circle NED-6894 on enclosed inquiry slip ▲

Fluid Coupling Drives

G. E. Nelson Co., Liquid Drive Div.—Flexible coupling, traction sheave and traction hub types of fluid coupling type Liquid Drives are detailed in illustrated bulletins and data sheets 6020-40-60-80. Sizes are available with capacities up to 25 hp at speeds to 1800 rpm. These drives simplify starting equipment under loads.

▲ For more details circle NED-6895 on enclosed inquiry slip ▲

Aluminum Fastenings

H. M. Harper Co.—The Harper line of aluminum fastenings has been expanded to include wide range of sizes and types of bolts, screws, self-tapping screws, nuts, washers, rivets and accessories, according to data given in illustrated catalog "Aluminum Fastenings." There's a size and type for practically every need.

▲ For more details circle NED-6896 on enclosed inquiry slip ▲

Sheet Metal Fabricator

Wales-Strippit Corp.—Details of the new Wales sheet metal fabricator which features the Hydra-New-Matic drive are given in 8-page illustrated catalog 10-A. Types of hole punching, notching and nibbling operations possible with this machine are covered. Round and shaped holes up to 3½-in. diameter can be punched.

▲ For more details circle NED-6897 on enclosed inquiry slip ▲

Soluble Silicates

Philadelphia Quartz Co.—"Serving Industry" is title of 16-page illustrated booklet which gives properties and applications of soluble silicates for cleaners, bleaching, corrosion control, soap, adhesives, cements, ore flotation, concrete hardeners and water treatment. Processes, advantages, trade names and properties are tabulated.

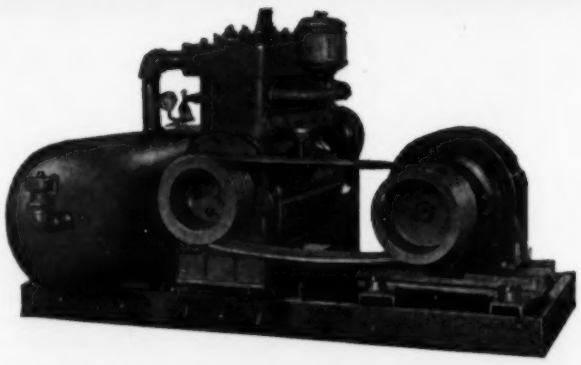
▲ For more details circle NED-6898 on enclosed inquiry slip ▲

Industrial Truck Attachments

Hyster Co.—24-page catalog "Attachments, Tools & Accessories" describes units which greatly extend the material handling abilities of company's lift trucks, Karry Kranes, straddle trucks and turret trucks.

▲ For more details circle NED-6899 on enclosed inquiry slip ▲

SCHRAMM *Unistage* AIR COMPRESSOR



ON BASE WITH MOTOR AND HORIZONTAL RECEIVER

SCHRAMM "V" Belt Drive On Base compressors are built for 24-hour continuous service with the least up-keep and operating cost. Built in sizes ranging from ½ to 100 h.p. Write for Catalog 5110.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

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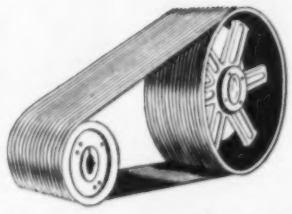
CONGRESS SHEAVES and V-BELTS

- Precision built. Soundly engineered. Widely used as original equipment by hundreds of the largest manufacturers of such appliances as washing machines, dryers, laundry equipment and air conditioning installations.
- Congress FHP pulleys are available in attractive 3-color individual boxes, with pulley outside diameter and bore size plainly marked. Simplifies storing-selling.



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▲ For more details circle NED-6901 on enclosed inquiry slip ▲

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* quality
* dependability
* economy
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* long service

When you specify B&W Electric-Resistance-Welded Boiler Tubes, you get 5-Star Satisfaction that goes beyond code requirements—plus values derived from metallurgically controlled materials, manufacturing precision, verified uniformity and meticulous inspection for perfection. Find out from Mr. Tubes—your B&W representative—or your local distributor what B&W 5-Star Satisfaction can mean to you, or write for information on B&W ERW Boiler Tubes.

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
General Offices & Plants
Beaver Falls, Pa. — Seamless Tubing, Welded Stainless Steel Tubing
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B&W SEAMLESS and WELDED TUBES

▲ For more details circle NED-6902 on enclosed inquiry slip ▲

Pipe Cost — $1,360 *Plus Installation*

Savings—Every Year—$8,000 *In Similar Equipment Groups*

Send for This Report

Details a case history on rubber lined pipe that applies to corrosion protection in any field. You will find it a thought-provoking text that may reveal ways you can use the services of our RUBBER ENGINEERS.

Amazing, yes—and 3½ years use has demonstrated that this saving is no temporary affair.

Many case histories have proven the merit of the La Favorite method of lining and/or covering pipe, valves, tanks and special equipment with exclusive La Favorite rubber compounds.

They have confirmed the value of this method of protection against corrosion and other destructive forces.

They show that it has SAVED countless thousands of dollars for users—and that is what counts!!!

Some of the Ways we are helping others

Made furnisher rolls for printing textiles, developed non-toxic white rubber linings for food processing equipment, constructed special rolls for the new non-contact printing process, devised static absorbing rolls, and provided many other specials for troubled production executives.

LA FAVORITE RUBBER MFG. CO.

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RUBBER LININGS • RUBBER COVERING • RUBBER ENGINEERING

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Pereco Electric Furnaces

• Space-Saving "CB" Series

Simple to install and easy to operate, this CB-55 (also larger sizes) handles exact pilot operations and other heat-treating work requiring close control of extremely flexible heat cycles. Size: 32" d. x 32½" w. x 64" h., with chamber 12" d. x 8¾" w. x 6" h. Uniform heat from 3 silicon carbide elements over and 3 under the chamber. All controls on front panel: automatic temperature controller, input meter, 36-tap auto-transformer with switch interlock, cut-off switch, and safety pilot-light. Wedge-fit counterbalanced door. 230-v., 60-cyc., 1-ph. A. C., with variable input 3.5 to max. 11 kw. Atmosphere connections optional. Write for bulletin today.

for laboratory and shop use 2500° F. for normal operation 3000° F. for short periods.

PERECO also makes standard and special furnaces for temperatures from 450° F. to 5000° F.

PERENY EQUIPMENT COMPANY
Dept. G, 893 Chambers Rd., Columbus 12, O.

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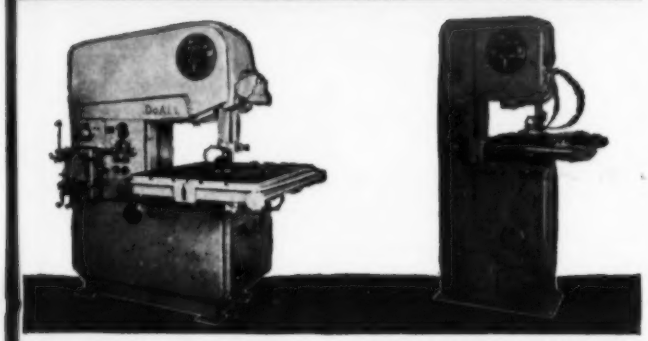
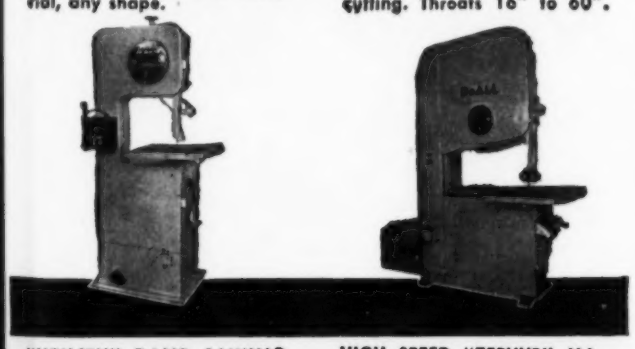
There is a DoALL BAND MACHINE to suit every purpose ... every pocketbook



THE "CONTOUR-MATIC"—The features and capabilities of all other models plus hydraulic controls, wider speed range, more power, greater tool variety. Cuts any material, any shape.

"ML" CONTOUR MACHINES—Five models—Precision machines for general purpose band sawing, filing, polishing. 50 to 1500 F.P.M. variable speed for conventional metal cutting. Throats 16" to 60".



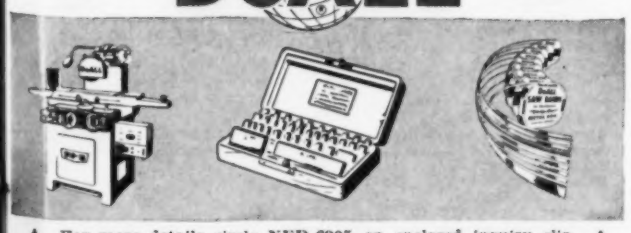
"UTILITY" BAND SAWING AND FILING MACHINES—Four models—16" throat. Two speed range 50 to 350 F.P.M. and 860 to 5200 F.P.M. Also available fixed speed. For small shops and experimental or model work in large shops.

HIGH SPEED "ZEPHYR" MACHINES—High speed 500 to 15000 F.P.M., fixed or variable. 16" to 60" throats. For high speed sawing of nonferrous metals and non-metallics, friction cutting ferrous sheet, plate up to 1".

EVERY SHOP can have the benefits of DoALL band machining, the fast, economical process that "slices" material apart instead of reducing it to pile of chips. There is a DoALL Band Machine and Band Tool for precision cutting every material, every shape—sawing, line grinding, polishing, honing, friction sawing, cutting. For production, maintenance, toolmaking—a DoALL will save manhours, material and money, free other machines for work to which they are better suited. Call your local DoALL Sales-Service Store for a free demonstration. Ask for literature.

THE DoALL COMPANY, 254 N. Laurel Ave., Des Plaines, Ill.
B-3½

INDUSTRY'S NEW TOOLS — DoALL — 33 SALES-SERVICE STORES



For more details circle NED-6905 on enclosed inquiry slip

New Literature & Catalogs

Refrigeration-Television-Heating-Motors

Harry Alter Co.—144-page illustrated "Dependabook No. 156" is latest catalog on line of mail order products in the refrigeration, television, heating and electric motor fields. Data and prices are given on thousands of components, subassemblies and complete equipment. Thoroughly indexed, this catalog contains all needed ordering information and order blanks. Standard equipment, supplies and tools are covered.

For more details circle NED-6906 on enclosed inquiry slip

Industrial Work Benches

Sturdi-Bilt Steel Products, Inc.—Construction details which adapt Sturdi-Bilt work benches for all types of work in industry are shown in 4-page illustrated bulletin SB10. Featuring tension-bolted frames and easy-sliding drawers, benches are supplied with heavy duty or standard tops of laminated hardwood construction with bonded hardboard surfaces.

For more details circle NED-6907 on enclosed inquiry slip

Fork Lift Trucks

Buda Co.—Illustrated bulletin 1579, 1580 and 1581 deal with series FT gasoline and electric powered fork lift trucks which have capacities of 3000 and 4000 lb. Complete specifications are given on six models.

For more details circle NED-6908 on enclosed inquiry slip

Electro-Chemical Equipment

Singleton Co.—Simplified formulas for estimating costs of H-T Lucite equipment for electro-chemical processing are contained in latest price schedule. Descriptions of plating tanks, cylinders, liners, baskets, buckets, trays, cells and other equipment made of Lucite plastic are included.

For more details circle NED-6909 on enclosed inquiry slip

Foundry Ceramics

American Lava Corp.—4-page illustrated booklet 522 deals with AlSiMag foundry ceramics that withstand heat shock. Data are given on strainer cores, gate tubes, cutoff cores and troughs.

For more details circle NED-6910 on enclosed inquiry slip

Lighting Fixtures

Wm. Penn Fluorescent Light Mfg. Co.—32-page illustrated 1952 catalog contains specifications, photometric and other data on commercial and industrial standard and slimline fluorescent luminaires, accessories and replacement parts.

For more details circle NED-6911 on enclosed inquiry slip

Steam Generators

Ames Iron Works—8-page illustrated bulletin 1050 covers construction, specifications, auxiliary equipment and other data on line of packaged type Amesteam steam generators.

For more details circle NED-6912 on enclosed inquiry slip

test metal hardness

directly on any size job!

Direct dial readings without conversion charts or calculations—accurate to: ± 1.5 pts. Rockwell, ± 5 pts. Brinell . . . on any size, shape, type metal . . . available in Rockwell "A", "B", "C" scales, Brinell Low & Medium ranges. Take accurate tests at-the-job!

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ERNST portable metal hardness testers
Manufactured in the United States

NEWAGE INTERNATIONAL, INC.
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For more details circle NED-6913 on enclosed inquiry slip

5 FIRMS ALONE PURCHASED. . .

2,165,458 LBS. SPEED PATCH

WORLD'S FINEST, FASTEST, FLOOR FIXER!

REPEAT ORDERS ARE PROOF OF A PRODUCTS MERIT

Many millions of pounds of Speed-Patch are in use. Five firms alone, purchased 2,165,458 lbs. The reason is simple. Speed-Patch is unequalled for patching worn, cracked, cratered floors. Easy to apply. Takes only one minute per square foot. No waiting to set or dry . . . truck over it immediately. It's tough, long-lasting, economical, ready-mixed. Write for details NOW!

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
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SELF OPERATING — EASY TO INSTALL

FOR BETTER TEMPERATURE CONTROL

Here's just the regulator to use when a simple device is required to maintain a constant temperature. Controls liquids or air. Prevents losses of OVER-heating. Saves fuel and labor. Users often report, "Economical, pays back its cost several times a year—gives years of reliable service". Variety of models. Will simplify your control problem.

Valve Sizes ¼" thru 8"

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Offices in over 50 Cities • Established 1891

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No. 11 REGULATOR FOR Heat Exchangers • Vats • Dryers
Jacket Water Cooling • Fuel and Crude Oil Heaters and Treaters
Bottle, Can, Dish and Metal Parts Washers • Drying Rooms

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The ONLY wire stitching machine with an

ELECTRICALLY ACTUATED POST

to eliminate operator fatigue

THE YOUNG CONQUEROR

- Operated by light pressure of the toe with both feet firmly on the floor.
- Sealed in Ball Bearings.
- Automatic Brake.
- Power Control Unit (150 to 350 stitches per minute)
- Simple Head Construction.

Add all of these and you have a YOUNG CONQUEROR

Some territory still open for distributors.

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For more details circle NED-6916 on enclosed inquiry slip

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SUPERDUTY ELECTRIC DRILLS

For Industry's Specific Needs

Here's what SUPERDUTY means to YOU . . . . . .

Reserve Power for maximum performance in all duty classifications

Speeds to meet job requirements

Compact, Lightweight, Streamline Design for handling ease and minimum fatigue

Top-Quality, Rugged Construction for endurance and trouble-free performance

No Price Premium makes Superduty tools unmatched values

48 MODELS
¼" Drills
500 to 5000 Rpm.
Pistol or Saw Grip

3 MODELS
½" Drills
400 to 1000 Rpm

3 MODELS
½" Drills
500 to 680 Rpm.

Superduty Drills Meet U. S. Government and Military Specifications

Ask your distributor for full details or write for general catalog to Portable Electric Tools, Inc., 353 West 83rd Street, Chicago 20, Illinois

In Canada: Portable Electric Tools, Ltd., Toronto, Ontario.

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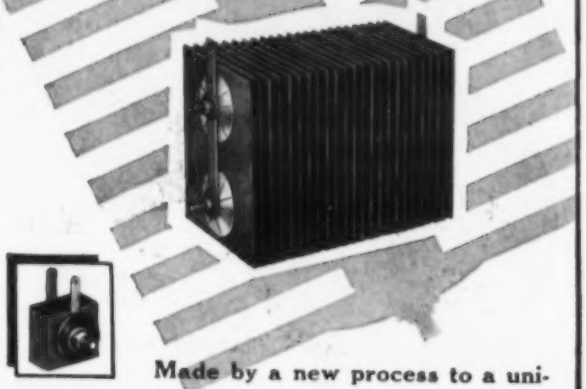

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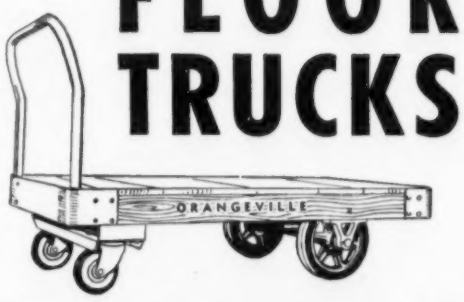

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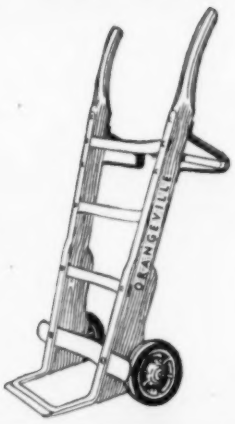

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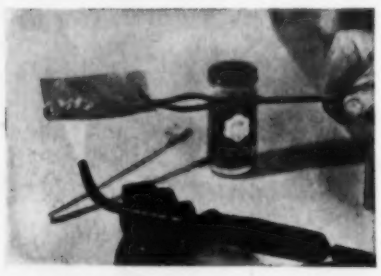

New liquid aluminum soldering flux makes possible sweating on aluminum, stainless steel, monel, copper, brass, steel or any combinations of same. The newly developed liquid chemical actually breaks the surface oxide on all types of aluminum so that a sweat job is possible in the same manner as ordinary flux on the common metals. Called Liquid ASMC Flux it makes possible the soldering together of such dissimilar metals as stainless steel to aluminum or any combinations of the above metals to aluminum or each other. When used in combination with Farrelloy All Metal Solder the Flux eliminates the electrolytic action between dissimilar metals so that a permanent bond, highly resistant to corrosion is obtained. ASMC Flux makes possible the use of induction heat as well as torch or iron. Production jobs using induction heat are now being accomplished putting two brass studs on Aluminum Name Plates at the rate of 250 per hour. Same flux when used with Farrelloy Solder is equally effective on filling in blow holes in aluminum castings, sweating name plates on cast iron, and many other jobs. ASMC Flux is priced at $3.50 per pound, fob Philadelphia. Farrelloy Solder $2.00 per pound, fob Philadelphia (14 bars to the pound). Write **Farrelloy Company, Dept. NED.** 1246 North 26th St., Philadelphia 21, Pa. *Advt.*

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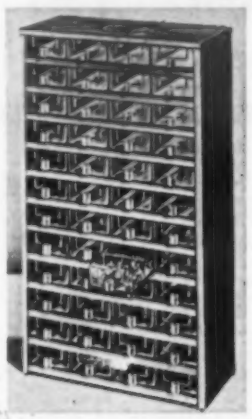

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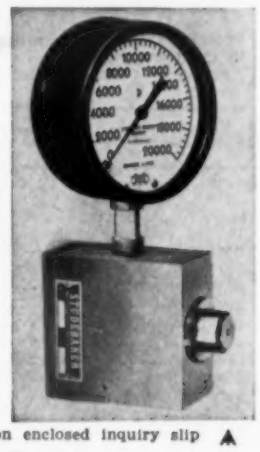
PRESSURE TESTER
indicates pressure of ram on work



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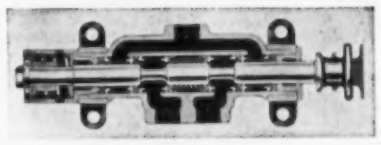
controls air, water, oil to 300 psi



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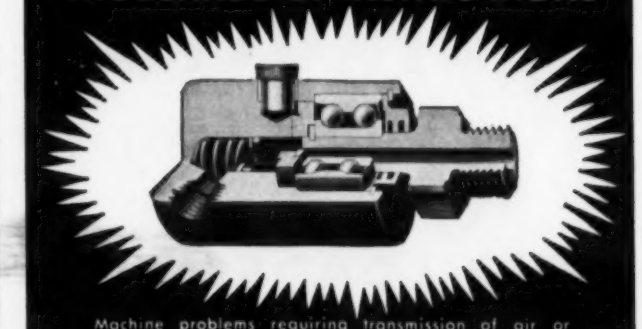

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